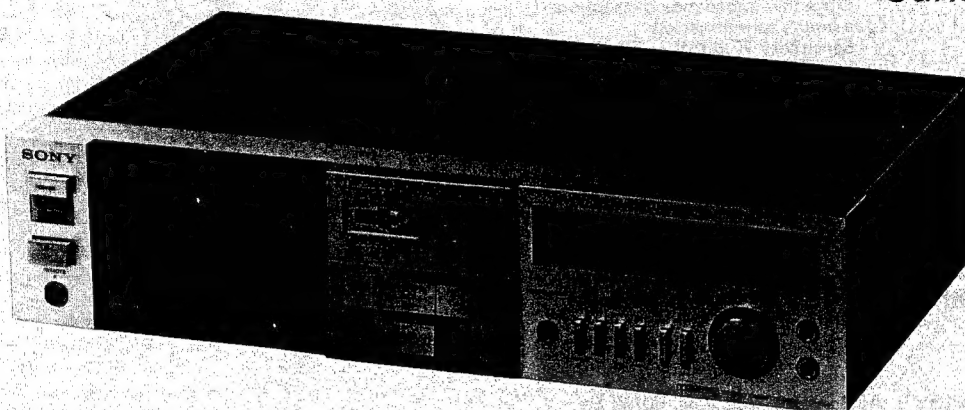


# TC-FX4

US Model  
Canadian Model  
AEP Model  
UK Model



'Dolby' and the double-D symbol are the trade marks of Dolby Laboratories. Noise reduction system manufactured under license from Dolby Laboratories.

## STEREO CASSETTE DECK

### SPECIFICATIONS

**Recording System:** 4-track 2-channel stereo

**Fast-forward and  
Rewind Time:** Approx. 90 sec. (with C-60 cassette)

**Bias Frequency:** 105 kHz

**Signal-to-noise Ratio:** DOLBY NR OFF

- With TYPE IV cassette (Sony METALLIC)  
58 dB at peak level (NAB)  
56 dB (DIN)
- With TYPE III cassette (Sony FeCr)  
58 dB at peak level (NAB)  
56 dB (DIN)
- With TYPE II cassette (Sony CD-α)  
57 dB at peak level (NAB)

DOLBY NR ON  
Improved by 5 dB at 1 kHz,  
10 dB above 5 kHz


**Total Harmonic  
Distortion:** 1.0 % (with Sony METALLIC and FeCr  
cassettes)

**Frequency Response:** DOLBY NR OFF


- With TYPE IV cassette (Sony METALLIC)  
20 – 17,000 Hz  
30 – 15,000 Hz (±3 dB)  
30 – 13,000 Hz (±3 dB, 0 VU recording)  
30 – 15,000 Hz (DIN)
- With TYPE III cassette (Sony FeCr)  
20 – 16,000 Hz  
30 – 15,000 Hz (±3 dB)  
30 – 15,000 Hz (DIN)
- With TYPE II cassette (Sony CD-α)  
20 – 16,000 Hz  
30 – 14,000 Hz (±3 dB)  
30 – 14,000 Hz (DIN)
- With TYPE I cassette (Sony BHF)  
20 – 15,000 Hz  
30 – 13,000 Hz (DIN)

— Continued on page 2 —

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES, LES VUES EXPLOSÉES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.



# SONY<sup>®</sup>

## SERVICE MANUAL

793

# TC-FX4

**Wow and Flutter:** 0.05 % WRMS (NAB)  
±0.17 % (DIN)

**Inputs:** Microphone inputs (phone jacks)  
Sensitivity 0.25 mV (−70 dB)  
For a low-impedance microphone  
Line inputs (phono jacks)  
Sensitivity 77.5 mV (−20 dB)  
Input impedance 50 kΩ

**Outputs:** Line outputs (phono jacks)  
Output level 0.435 V (−5 dB) at load  
impedance 50 kΩ  
Load impedance over 10 kΩ  
Headphone output  
Output level 31 mV (−28 dB) at a load  
impedance of 8 Ω

**Record/Playback Jack:** Input impedance less than 10 kΩ  
(AEP model) Output impedance less than 10 kΩ

## GENERAL

**Power Requirements:** AEP model: 220 V ac, 50/60 Hz  
(240 V ac adjustable by authorized  
Sony personnel)  
UK model: 240 V ac, 50/60 Hz  
(220 V ac adjustable by authorized  
Sony personnel)  
US, Canadian model: 120 V ac, 60 Hz

**Power Consumption:** 22 W

**Dimensions:** Approx. 430(w) x 105(h) x 250(d) mm  
16<sup>7</sup>/<sub>8</sub> (w) x 4<sup>1</sup>/<sub>8</sub> (h) x 9<sup>7</sup>/<sub>8</sub> (d) inches  
including projecting parts and controls

**Weight:** Approx. 4 kg (8 lbs 13 oz)

**Supplied Accessories:** Connecting cord . . . . . 2  
Head cleaning tips . . . . . 1 set

**0 dB = 0.775 V**

While the information given is correct at the time of printing, small production changes in the course of our company's policy of improvement through research and design might not necessarily be indicated in these specifications. We ask you to check with your appointed Sony dealer if clarification on any point is required.

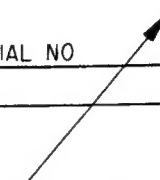
### Note

Appliance conforms with EEC Directive 76/889 regarding interference suppression.

**Tape Transport Mechanism Type: TCM-110V3**

**MODEL IDENTIFICATION**

— Specification Label —

<b>SONY®</b>	<b>TAPECORDER</b> <b>MODEL No. TC-FX4</b>
	<u>SERIAL NO</u>  <b>MADE IN JAPAN</b>

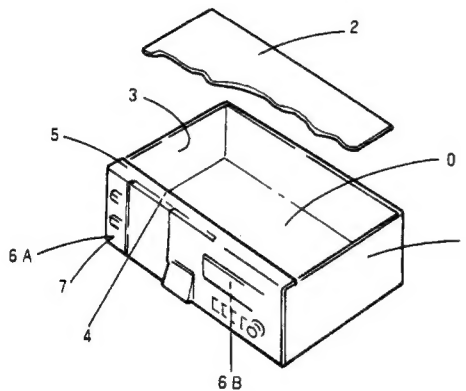
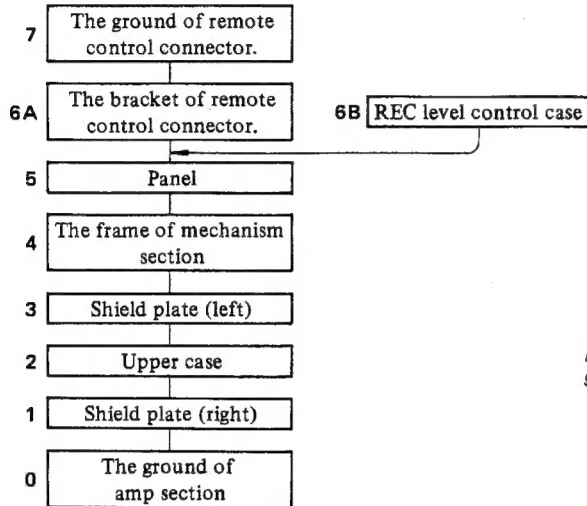
US, Canadian model: AC 120V 60Hz 22W  
AEP model: AC 220V~ 50/60Hz 22W  
UK model: AC 240V~ 50/60Hz 22W

## SERVICE NOTE

### The Grounded Circuit On Repairing

The ground is connected in the numerical order as shown below.

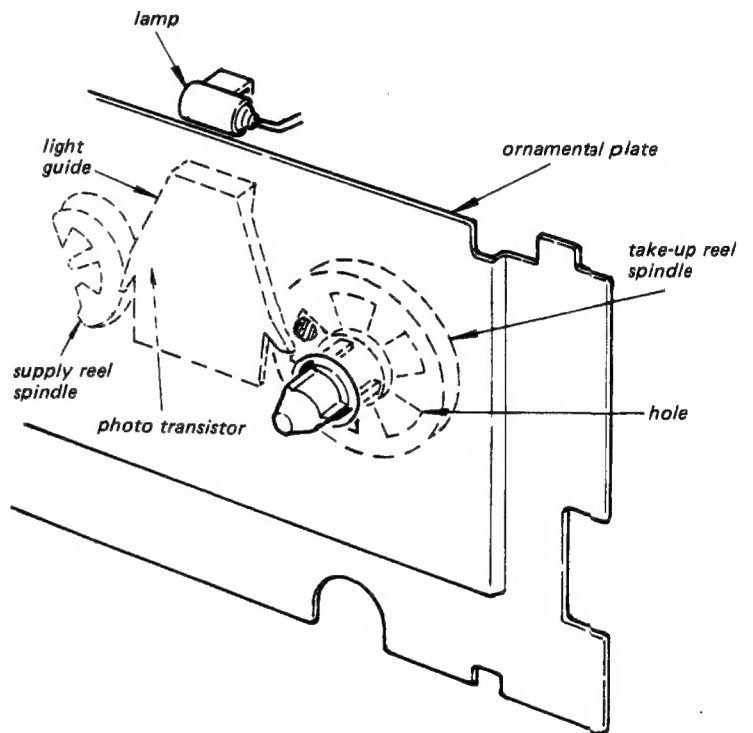
When removing parts, make the grounded circuit by using the clip cord.



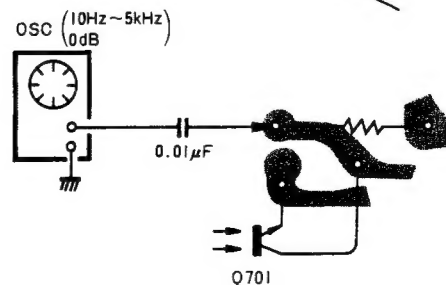
### Shut-Off Detection and Precaution On Repairing

In this set, the shut-off detection is made optically. The take-up reel spindle has five holes. The light of the lamp received by the light guide is intermittently applied to the photo transistor by means of the rotation of the reel spindle. The pulse generated by the photo transistor Q701 is amplified by Q601 and is fed to the mechanism control IC401.

Accordingly, when it is necessary to repair the unit after removing the ornamental plate, connect an af oscillator to the collector of Q701 as shown below, so as not to operate the shut-off mechanism.



MD board (conductor side)



## Handling Precautions for MOS ICs

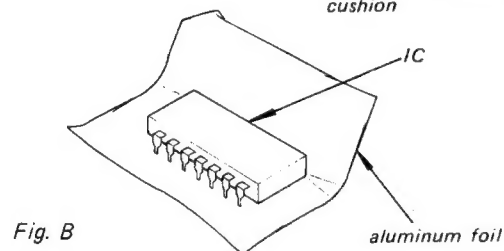
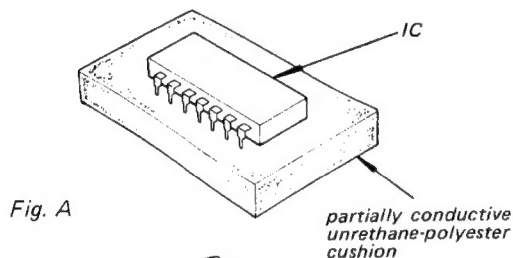
Generally, the insulation resistance of the oxide layer in MOS IC structures is very high, and the oxide layer is very thin. Because of this, it is possible that the static voltages usually present on clothes and the human body will be enough to generate a potential difference across the insulator, high enough to cause a breakdown of the insulating layer.

The following precautions should be taken while handling these ICs.

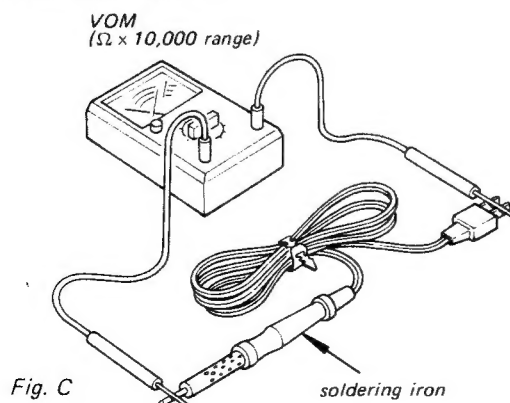
(Particular care should be taken under conditions of low humidity.)

### Precautions in Replacing MOS ICs

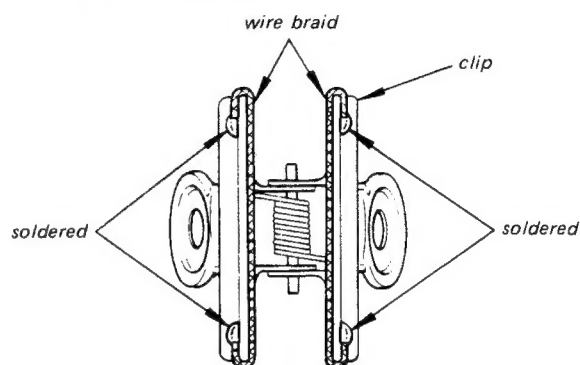
1. Store new ICs by inserting them into a urethane-polyester cushion (which is somewhat conductive), or wrapping it in aluminum foil, so that all the pins are at the same potential. (The ICs should be stored in that manner until mounted on the circuit board.)



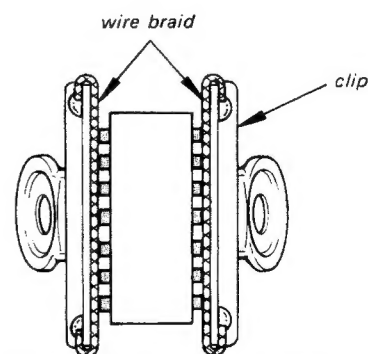
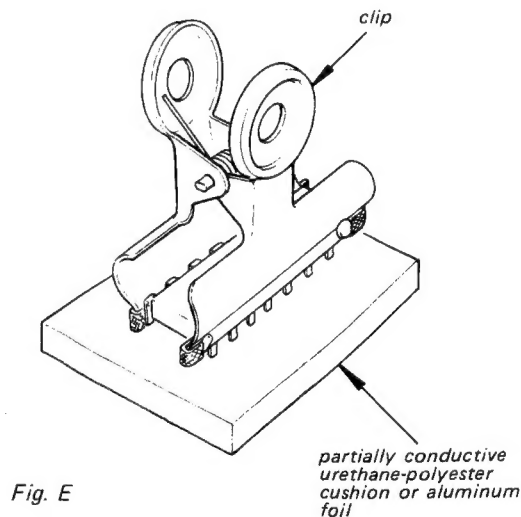
2. Check the soldering iron for possible power-line leakage current. Make sure that there is no leakage path by connecting an ohmmeter to the tip of the soldering iron and the plug as shown in Fig. C. If there is a leakage path, use some other soldering iron.



3. Equalize any potential difference between the clothes, the tools in use, the work bench, the set being worked on, and the packaged IC by touching them all in succession with the hands or a conductive wire or tool.
4. The following are effective methods for handling ICs that remove the potential difference across the oxide layer.
  - Use a paper clip modified by soldering in a wire braid insert.



Make sure that there is no solder on the inside.



Make sure that all the pins are in contact with the wire braid (all the pins will then be at the same potential.).

- Take a short length of fine bare wire and wind it around the IC so that it shorts all the pins of the IC, while it is still in the urethane-polyester cushion or aluminum foil. This ensures that all the pins are at the same potential.

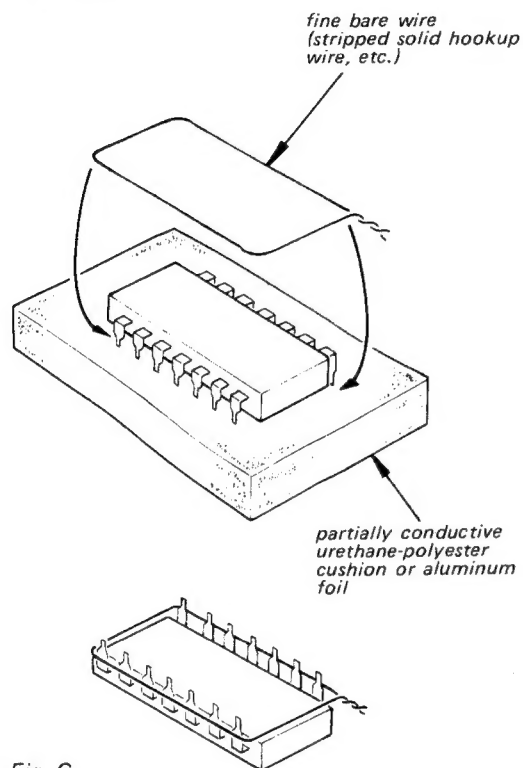


Fig. G

- When it is necessary to handle the IC with the fingers, do not touch any pin, and hold the IC at the ends of its plastic-package case as shown in Fig. H.

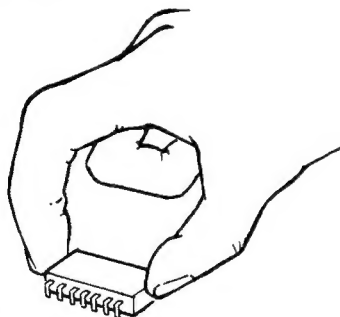


Fig. H

## 5. Method of Mounting

Insert the IC while holding it with the modified clip, and solder all the pins with the clip still shorting the pins. (Similarly, solder all the pins while the bare shorting wire is still wound around them.). Remove the clip or the bare shorting wire only after all the pins have been soldered.

## Precaution while Checking C-MOS ICs

The C-MOS ICs (Complementary MOS) are MOS ICs that have their output sections made up of N-channel and P-channel push-pull stages to increase their speed of operation. If the output terminal of these ICs comes into contact with B+ or B- voltage, then the FET which is ON at that time will either become shorted or open.

This is valid for all the output sections that are connected together by the interconnections. Even the circuits that are physically separated (and not on the same board) can be destroyed simultaneously.

### Example:

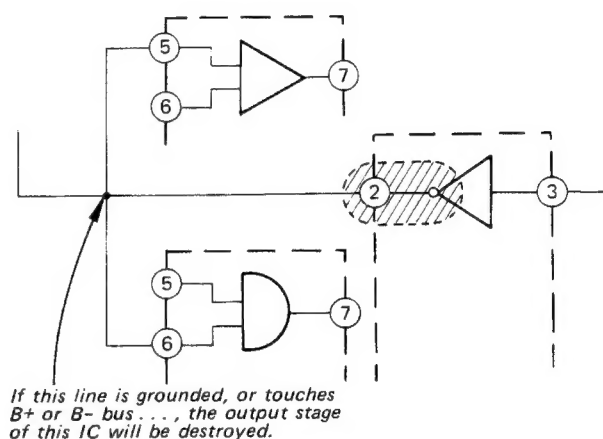
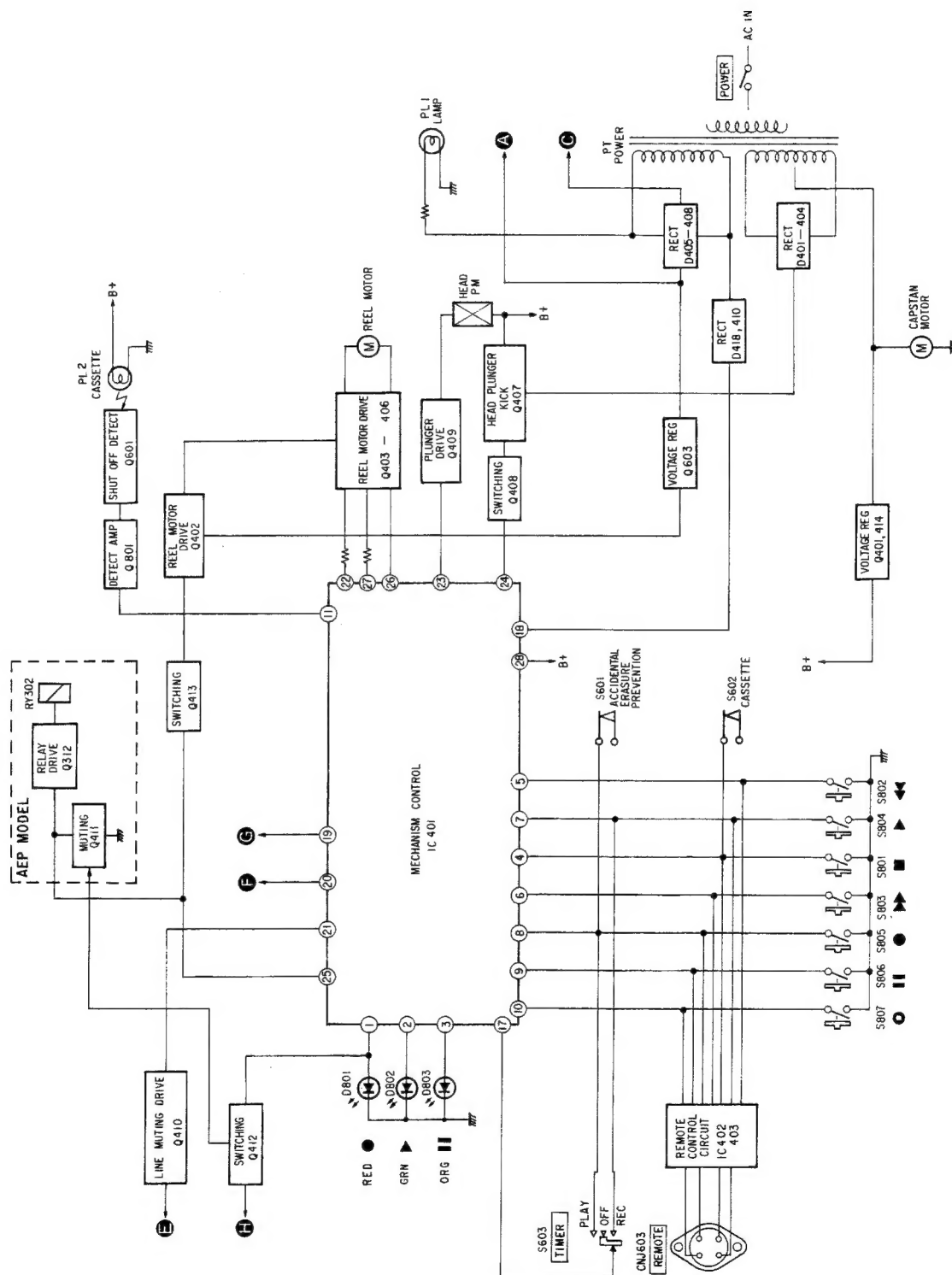
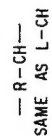


Fig. I

# SECTION 1 OUTLINE

## 1-1. BLOCK DIAGRAMS — System Control Section —



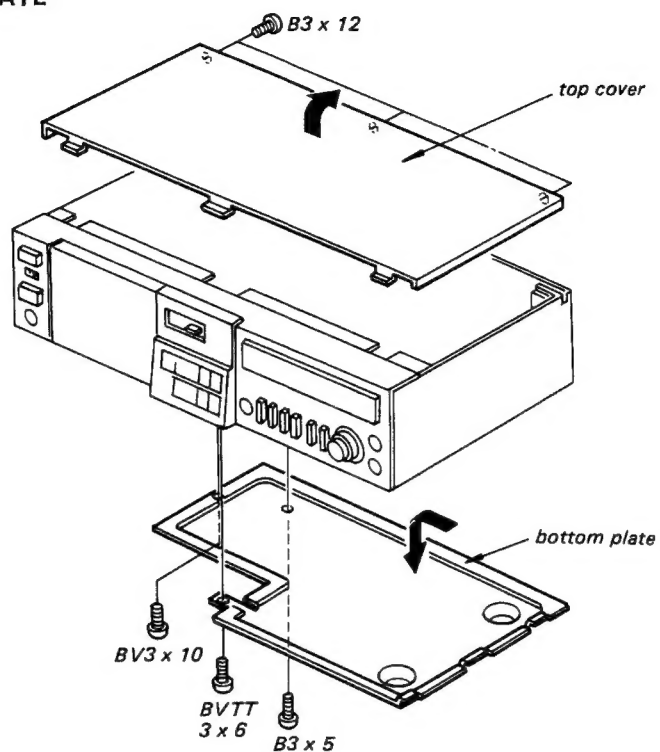




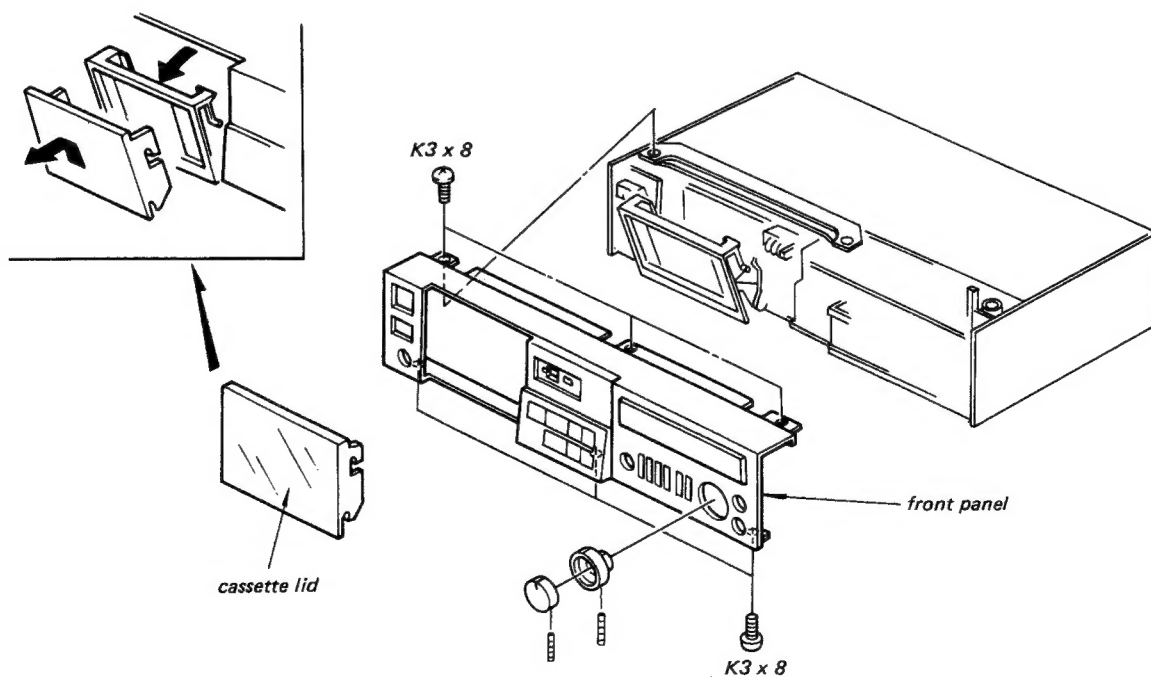
## SECTION 2 DISASSEMBLY

**Note:** Follow the disassembly procedure in the numerical order given.

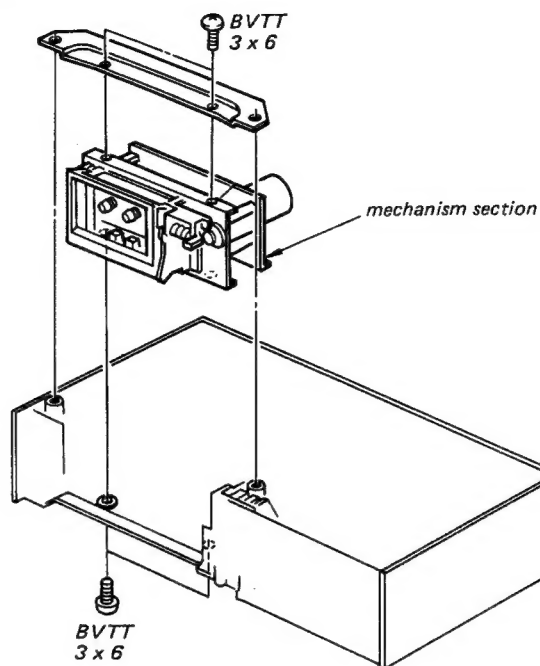
### TOP COVER/BOTTOM PLATE



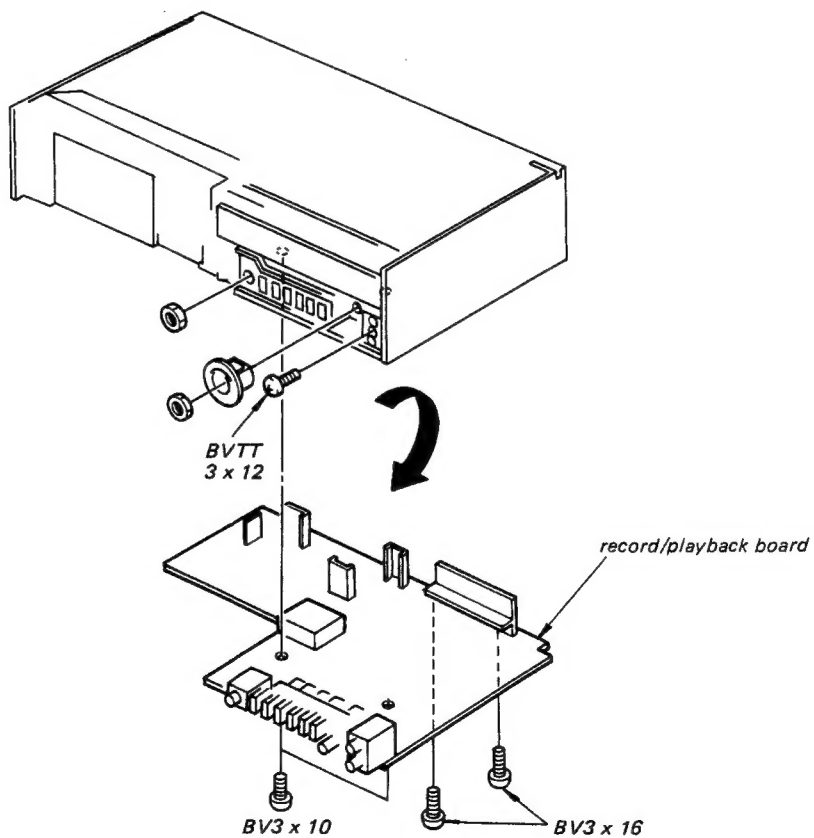
### FRONT PANEL



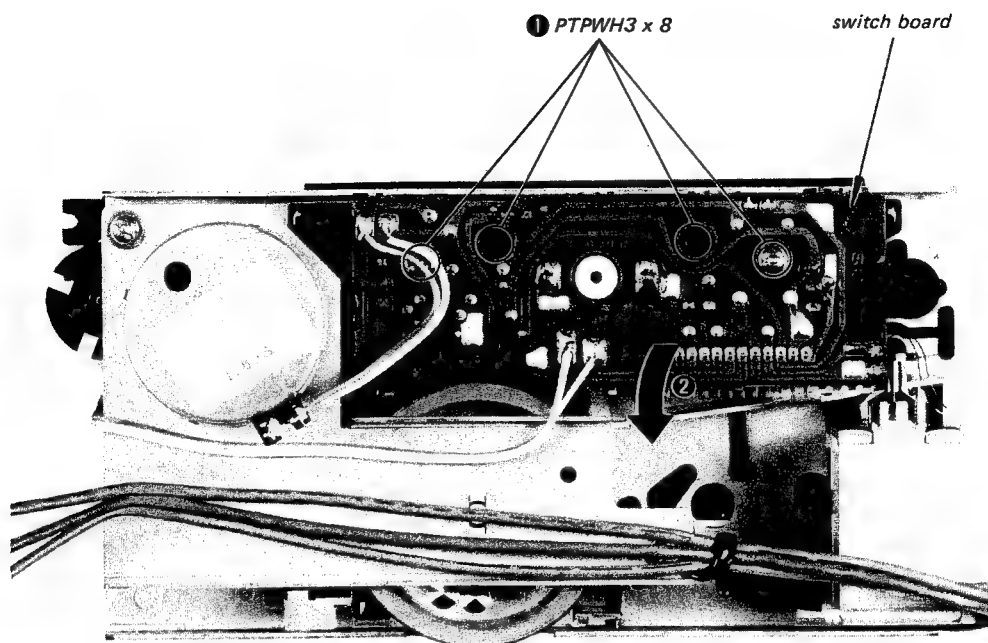
**MECHANISM SECTION**



**RECORD/PLAYBACK BOARD**

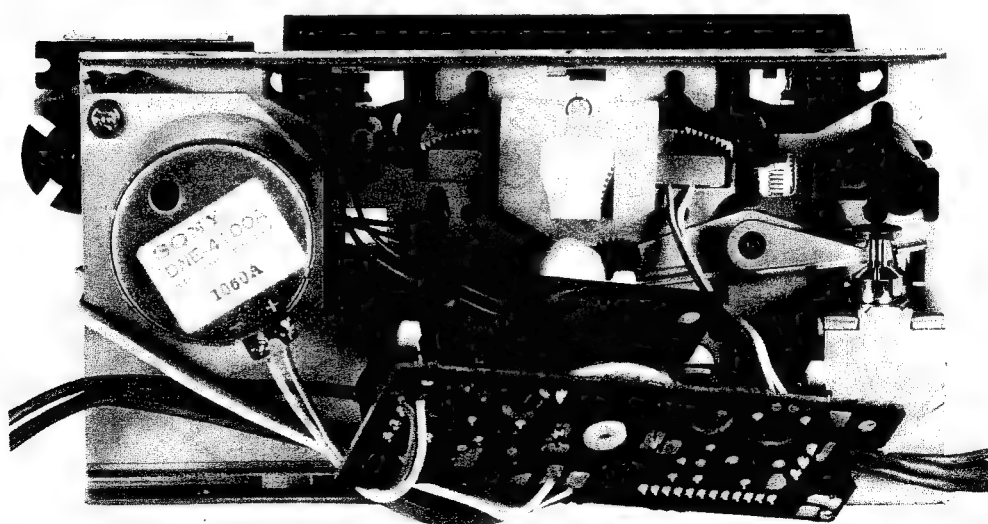


SWITCH BOARD



INSIDE OF MECHANISM SECTION

- rear view



- front view: Refer to photos on mechanical adjustment.

## SECTION 3 ADJUSTMENTS

### 3-1. MECHANICAL ADJUSTMENTS

#### PRECAUTION

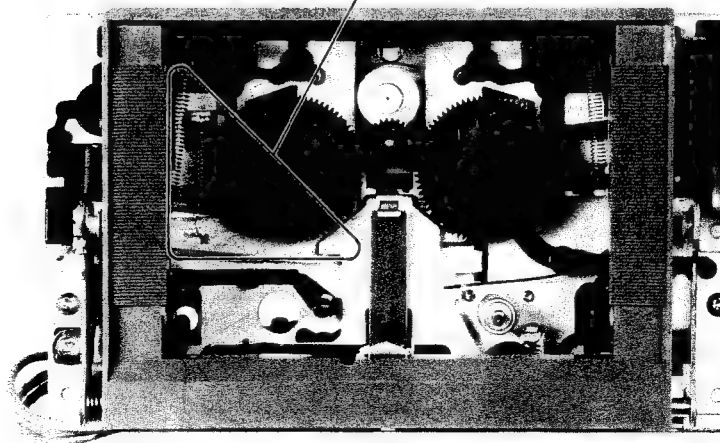
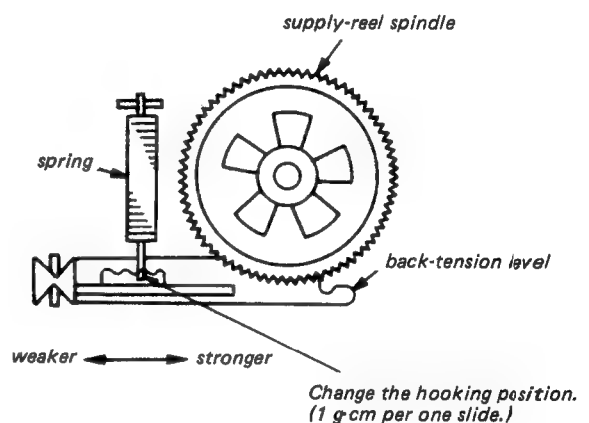
1. Clean the following parts with a denatured-alcohol-moistened swab:
 

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

#### Torque Measurement and Back Tension Torque Adjustment

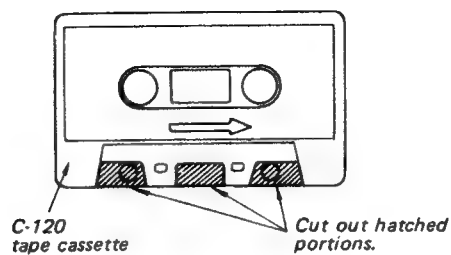
Torque	Torque meter	Meter reading
Forward	CQ-102C	35–55 g·cm (0.48–0.76 oz·inch)
Fast forward, rewind	CQ-201A	110–165 g·cm (3.80–5.82 oz·inch)
Back tension	CQ-102C	2.5–4.5 g·cm (0.04–0.06 oz·inch)

2. If the specified back-tension torque is not obtained, change the hooking position.

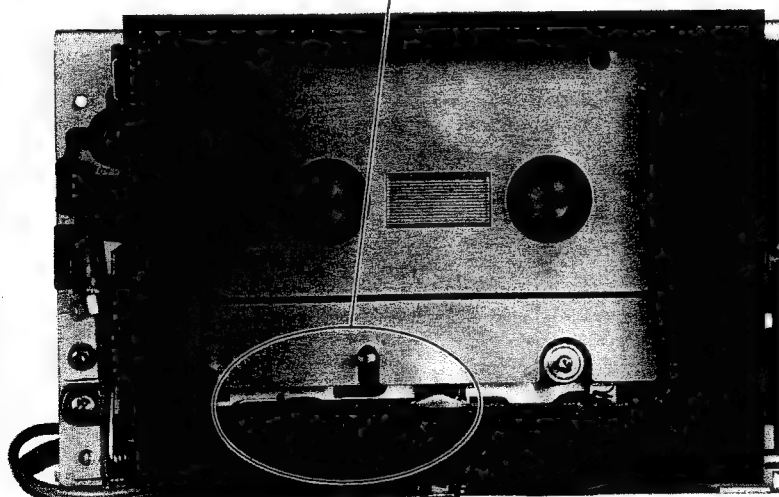
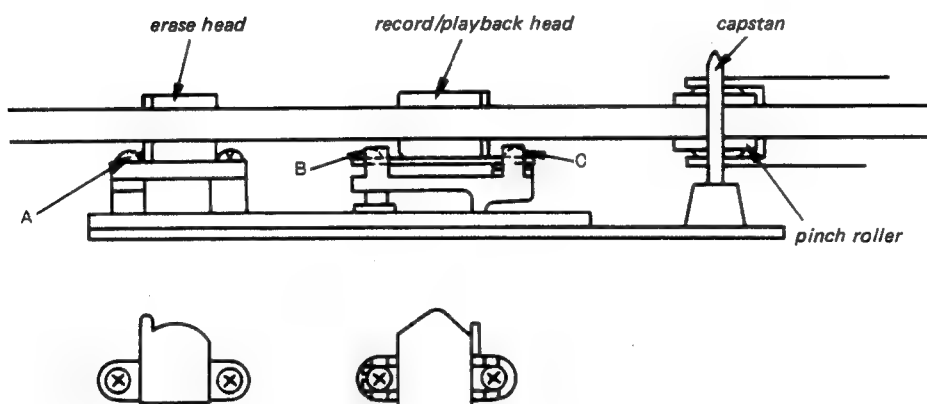


# Head Height Adjustment

1. Prepare an adjustment cassette as shown below.



2. In playback mode and viewing from the front, adjust the head heights by using the adjustment screw A, B, C, to eliminate tape curl and tape twist.



## 3-2. ELECTRICAL ADJUSTMENTS

**Note:** The adjustment should be performed in the order given in this service manual. (Playback section may be adjusted earlier than record section.)  
The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE switches according to the tape as follows.

Tape	TAPE switch
CS-10	TYPE I
CS-20	TYPE II
CS-30	TYPE III
CS-40	TYPE IV

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF  
TAPE switch: TYPE I  
TIMER switch: OFF

- Standard Record :

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

### Standard Input Level

	MIC	LINE IN
source impedance	300 $\Omega$	10 k $\Omega$
input level	0.77 mV (-60 dB)	0.25 V (-10 dB)

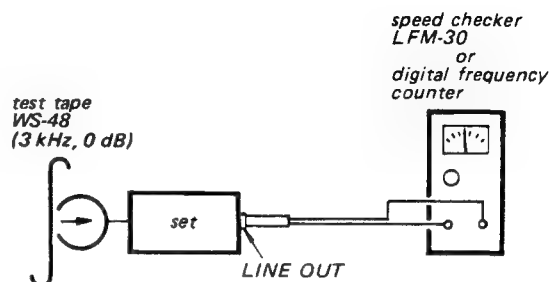
### Standard Output Level

	HEAD-PHONES	LINE OUT
load impedance	8 $\Omega$	47 k $\Omega$
output level	39 mV (-26 dB)	0.44 V (-5 dB)

## Capstan Motor Speed Adjustment

### Procedure:

Mode : playback



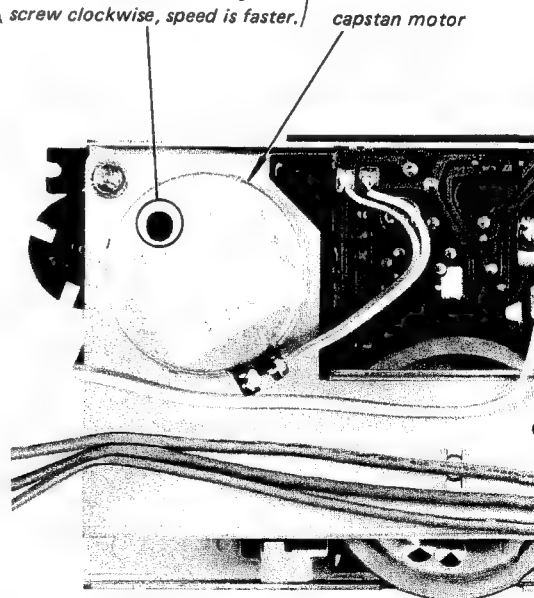
### Specification:

Speed checker	Digital frequency counter
-0.3 - +0.3 %	2,990 - 3,010 Hz

Frequency difference between the beginning and the end of the tape should be within 1 % (30 Hz).

### Adjustment Location:

(Adjust the speed by using screwdriver. When turning the screw clockwise, speed is faster.)

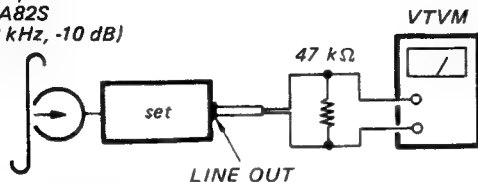


### Record/playback Head Azimuth Adjustment

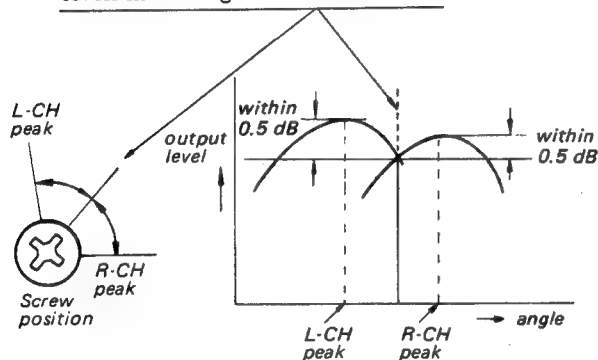
#### Procedure:

1. Mode: playback

test tape  
P-4-A82S  
(6.3 kHz, -10 dB)

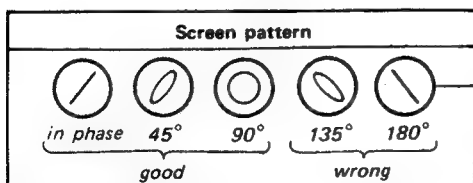
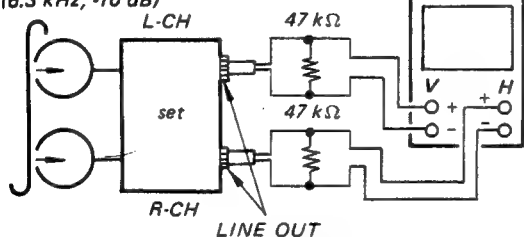


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.

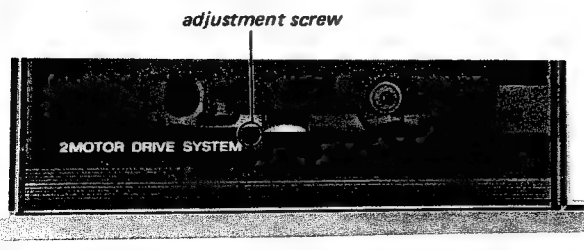


3. Phase Check  
Mode: playback

test  
P-4-A82S  
(6.3 kHz, -10 dB)



#### Adjustment Location:

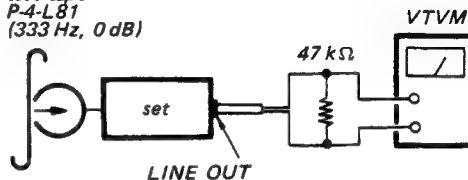


### Playback Level Adjustment

#### Procedure:

Mode :playback

test tape  
P-4-L81  
(333 Hz, 0 dB)



#### Specification:

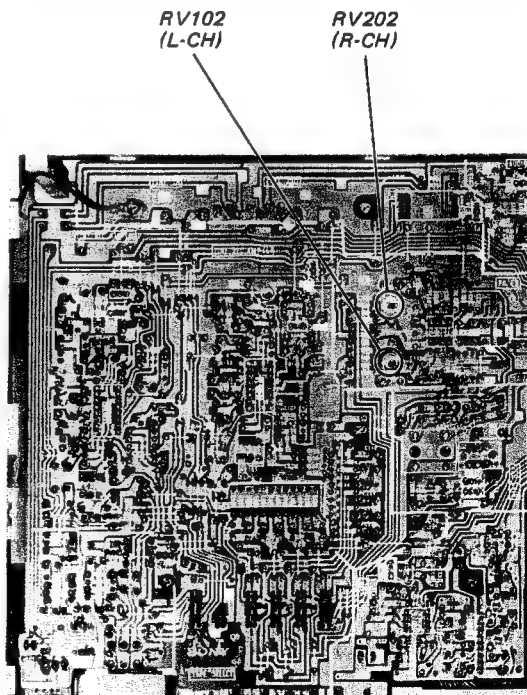
LINE OUT level : 0.52 ~ 0.59 V  
(-3.5 ~ -2.5 dB)

Level difference between channels :  
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

#### Adjustment Location:

- record/playback board -



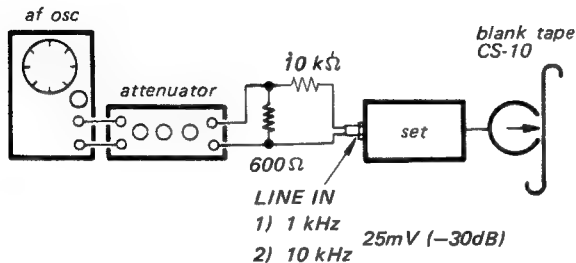
## Record Bias Adjustment

Setting:

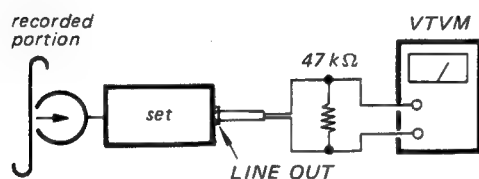
REC LEVEL control: standard record  
(See page 14)

Procedure:

1. Mode: record



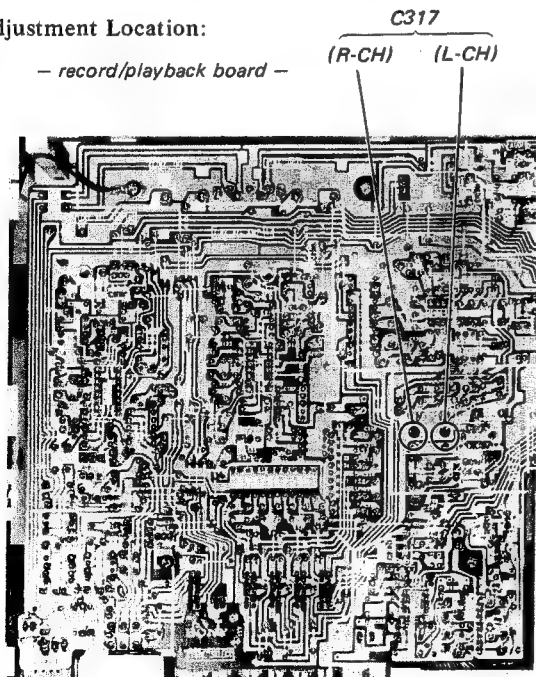
2. Mode: playback



Adjust BIAS trimmer C317 (L-CH, R-CH) so that the LINE OUT level of 10 kHz signal is 0 dB relative to that of 1 kHz.

Adjustment Location:

— record/playback board —



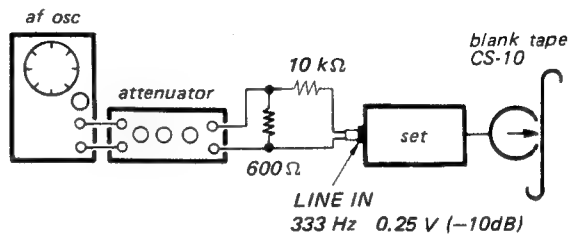
## Record Level Adjustment

Setting:

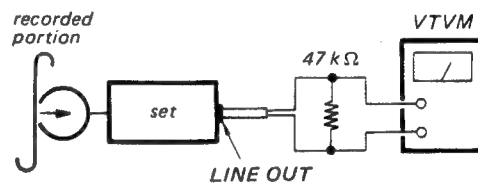
REC LEVEL control: standard record  
(See page 14)

Procedure:

1. Mode: record



2. Mode: playback



Specification:

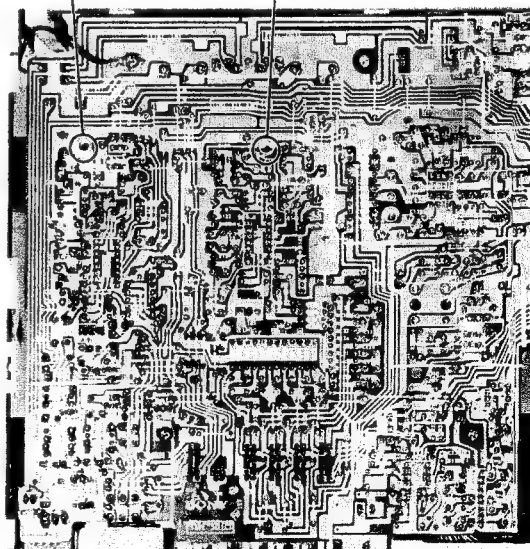
LINE OUT level : 0.41 ~ 0.46 V  
(-5.5 ~ -4.5 dB)

Adjustment Location:

— record/playback board —

RV203  
(R-CH)

RV103  
(L-CH)

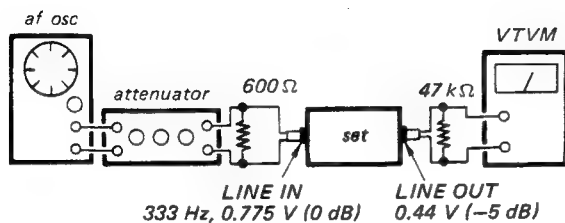




### Level Meter Calibration

#### Procedure:

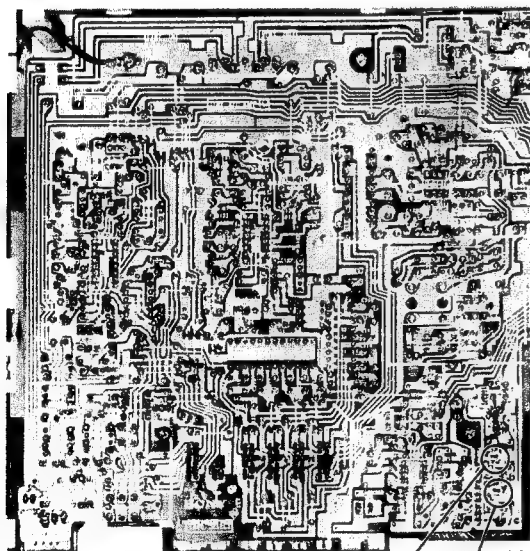
1. Mode : record



2. Set the REC LEVEL control so that the LINE OUT level is -5 dB.
3. Adjust RV104 (L-CH) and RV204 (R-CH) to obtain 0 VU on the level meter.

#### Adjustment Location:

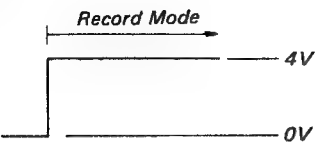
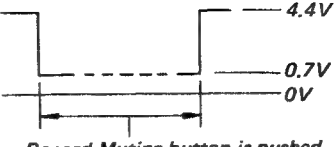
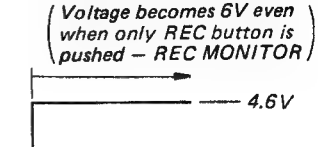
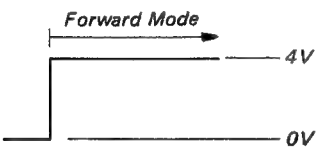
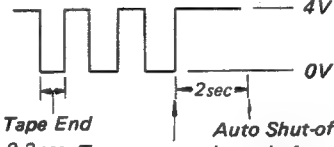
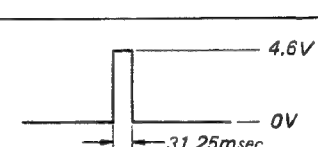
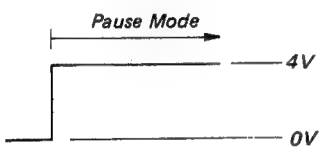
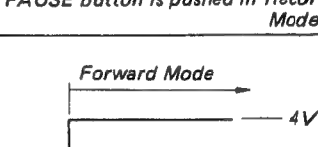


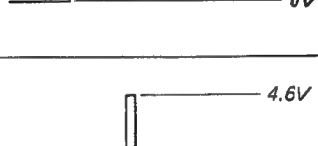
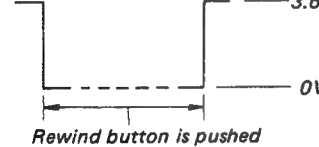
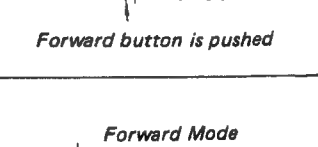
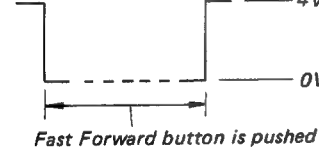
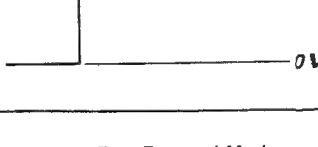
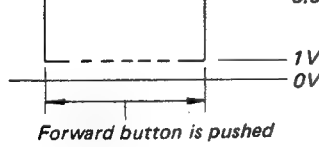
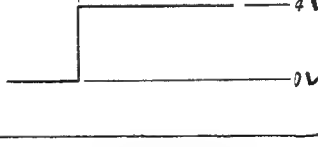
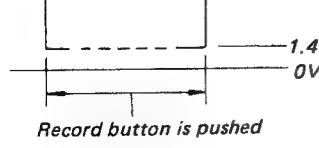
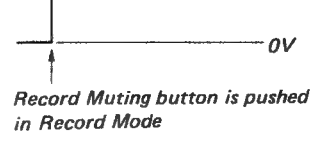
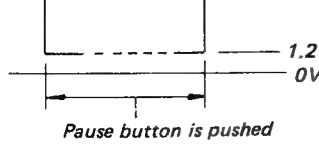
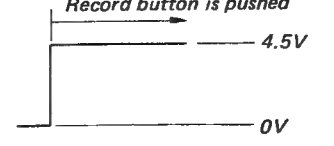
— record/playback board —



RV204  
(R-CH)

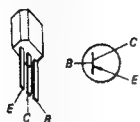
RV104  
(L-CH)

## Voltages and Waveforms at the Terminals of IC401

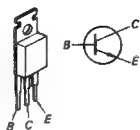
Terminal No.	Waveform or Voltage	Terminal No.	Waveform or Voltage	Terminal No.	Waveform or Voltage
①	 Record Mode 4V 0V	⑩	 4.4V 0.7V 0V Record Muting button is pushed	②①	 Forward Mode or Record Mode (Voltage becomes 6V even when only REC button is pushed - REC MONITOR) 4.6V 0V
②	 Forward Mode 4V 0V	⑪	 4V 0V 2sec Tape End 0.2 sec Auto Shut-off Tape stops at the end of the tape in Forward Mode. (Voltage may fall to 0V by rotating angle of take-up reel spindle after shut-off mechanism operates.)	②②	 4.6V 0V 31.25msec PAUSE button is pushed in Record Mode
③	 Pause Mode 4V 0V	⑫		②③	 Forward Mode 4V 0V
④	 3V 0V Stop button is pushed	⑬	 1Vp-p 8msec	②④	 4.6V 0V 0.25 sec Forward button is pushed
⑤	 3.6V 0V Rewind button is pushed	⑭	0Vdc	②⑤	 Fast Forward Mode 4V 0V
⑥	 4V 0V Fast Forward button is pushed	⑮	5Vdc	②⑥	 Fast Forward Mode 4V 0V
⑦	 5.6V 1V 0V Forward button is pushed	⑯	3Vdc	②⑦	 Rewind Mode 4V 0V
⑧	 4.2V 1.4V 0V Record button is pushed	⑰	 4.5V 0V Record Muting button is pushed in Record Mode	②⑧	5Vdc
⑨	 4.1V 1.2V 0V Pause button is pushed	⑱	 4.5V 0V Record button is pushed		

• Semiconductor Lead Layout

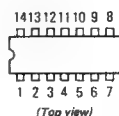
2SA844  
2SA1026  
2SA1027R



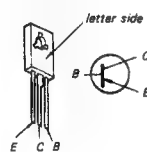
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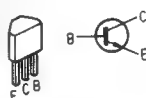
μPC339C



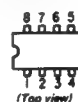
2SB731



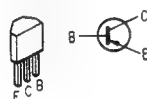
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2SD1020



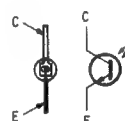
NJM2903D  
NJM4562D  
μPC4557C



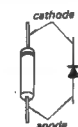
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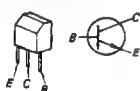
PH102



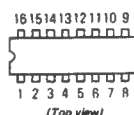
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EQB01-15  
HZ6C-3L  
10E2  
HZ6B1L



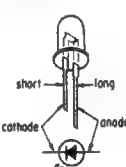
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2SC1345



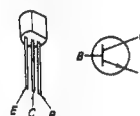
CX174-2



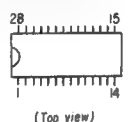
AA3432S  
AR3432S  
PG3432S



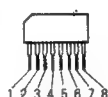
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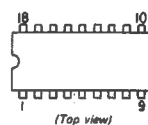
MSM5836  
MSM5836RS



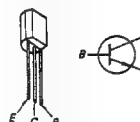
TA7332P



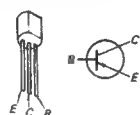
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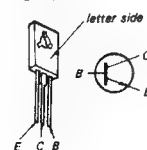
2SC945  
2SC2001



2SA952  
2SA844

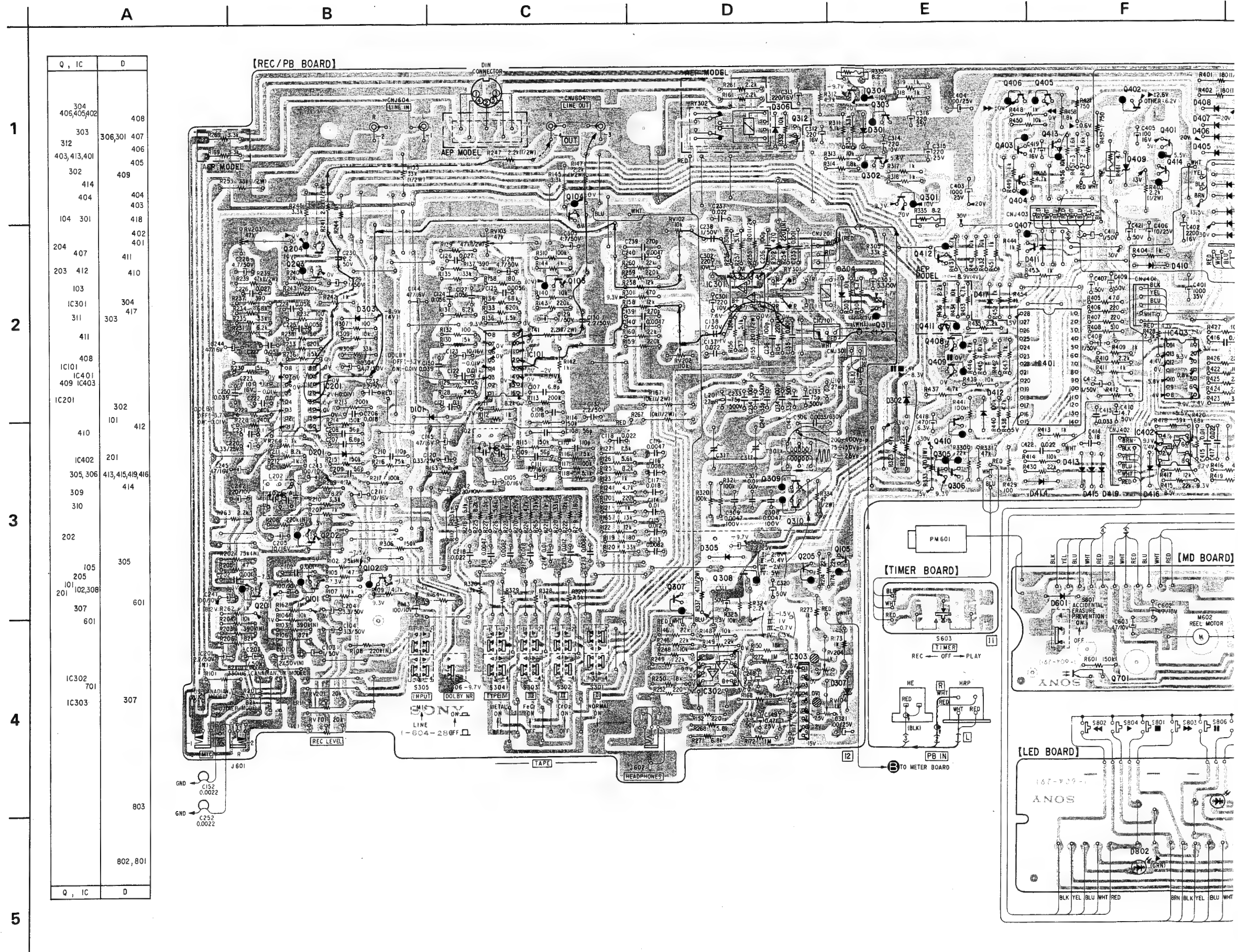


2SD809  
2SD862



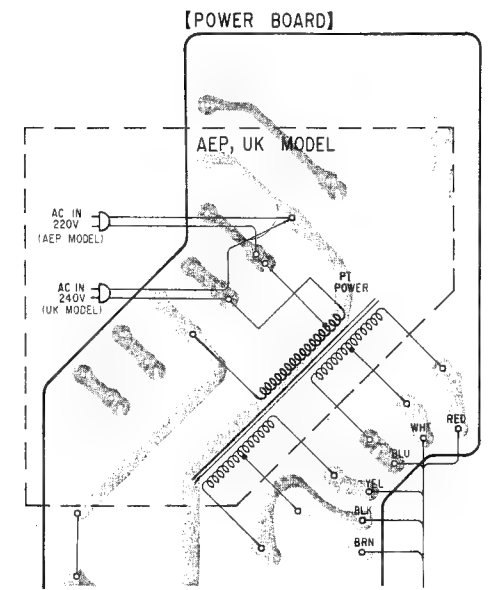
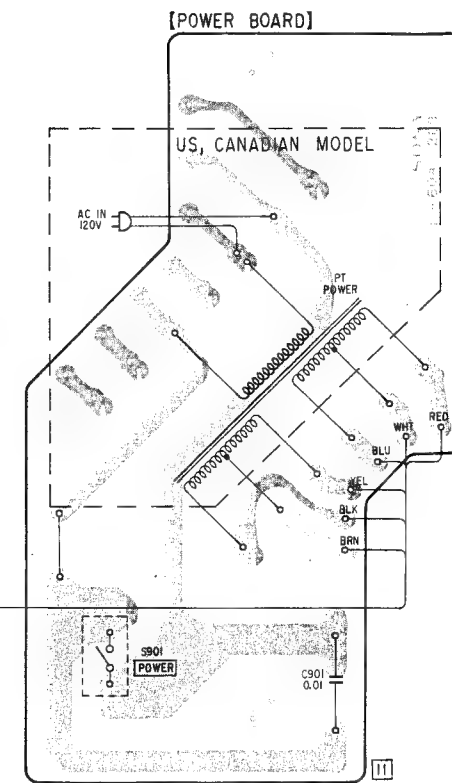
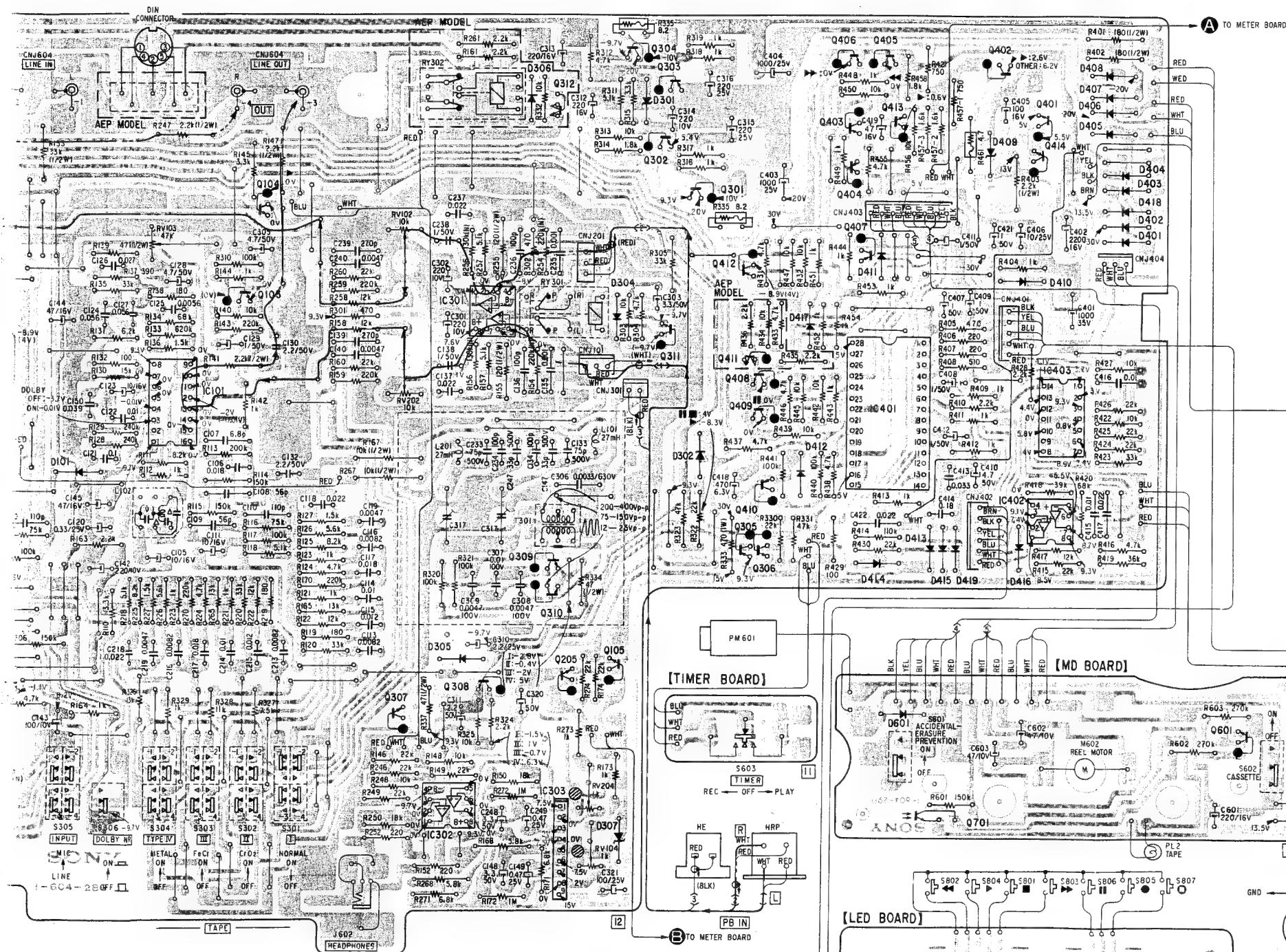
SECTION 4  
DIAGRAMS4-1. MOUNTING DIAGRAM — Conductor Side —  
— System Control and Audio Amp Section —

- See page 19 for the semiconductors lead layout.
- Refer to page 18 for voltages and waveforms at the terminal of IC401.

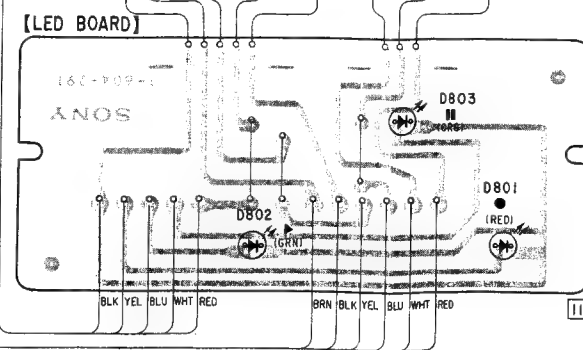
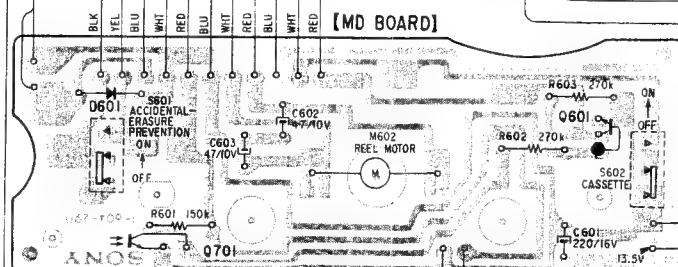
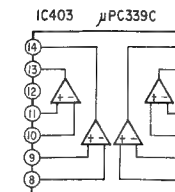
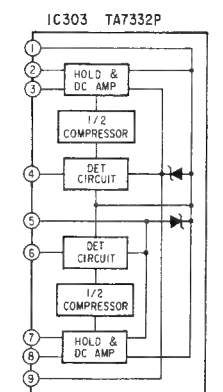
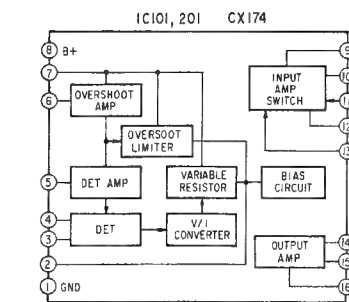
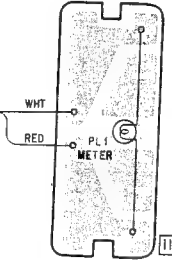




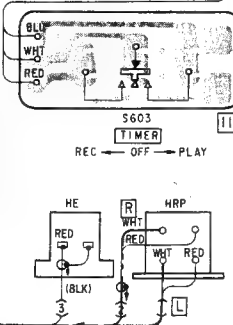
C D E F G H I J



[LAMP BOARD]



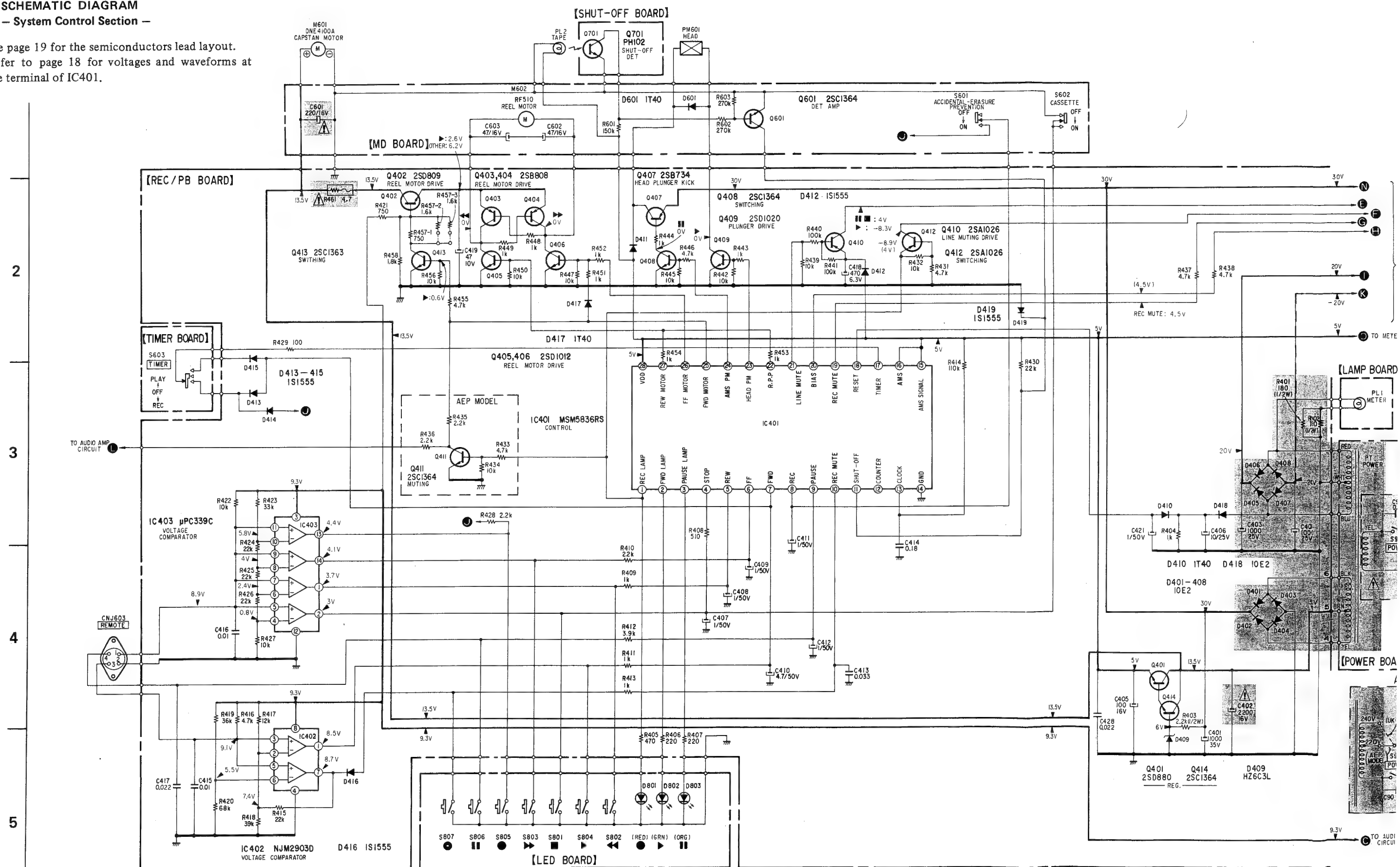
[TIMER BOARD]

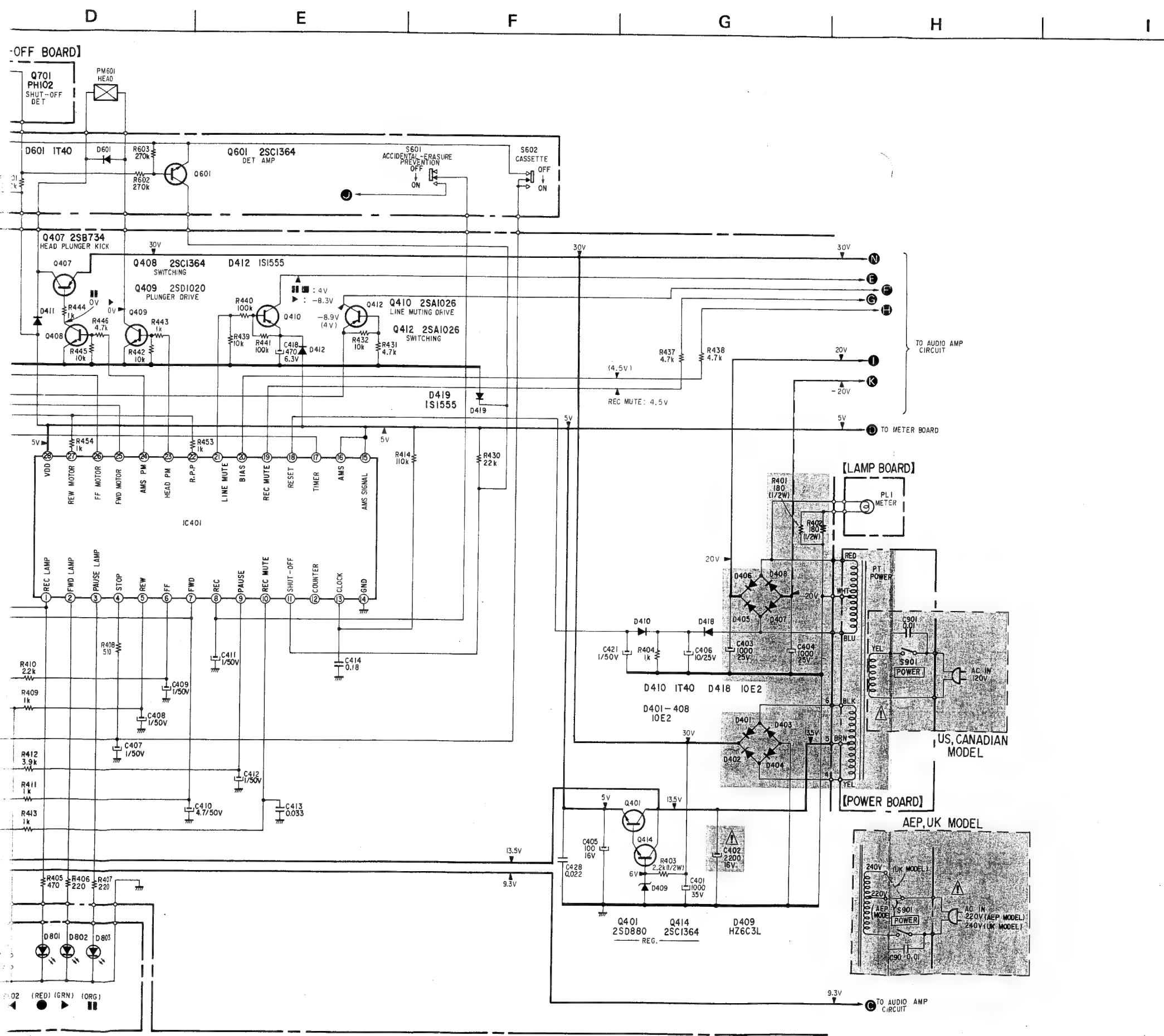


# TC-FX4 TC-FX4

## 4-2. SCHEMATIC DIAGRAM — System Control Section —


- See page 19 for the semiconductors lead layout.
- Refer to page 18 for voltages and waveforms at the terminal of IC401.






- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} : \mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in ohms,  $\frac{1}{4}\text{W}$  unless otherwise noted.  $\text{k}\Omega : 1000\Omega$ ,  $\text{M}\Omega : 1000\text{k}\Omega$
  - — : B+ bus.
  - --- : B- bus.
  - Voltages are dc with respect to ground unless otherwise noted.
  - Readings are taken under no-signal conditions with a VOM (20  $\text{k}\Omega/\text{V}$ ).
  - no mark : STOP
  - : STOP
  - ▶ : FWD
  - ◀ : REW
  - ▶▶ : FF
  - : REC
  - : PAUSE
  - Voltage variations may be noted due to normal production tolerances.
  - Switches

Ref. No.	Switch	Position
S601	ACCIDENTAL ERASER PREVENTION	OFF
S602	CASSETTE	OFF
S603	TIMER	OFF
S801	STOP	OFF
S802	REW	OFF
S803	FF	OFF
S804	FWD	OFF
S805	REC	OFF
S806	PAUSE	OFF
S807	REC MUTE	OFF
S901	POWER	OFF

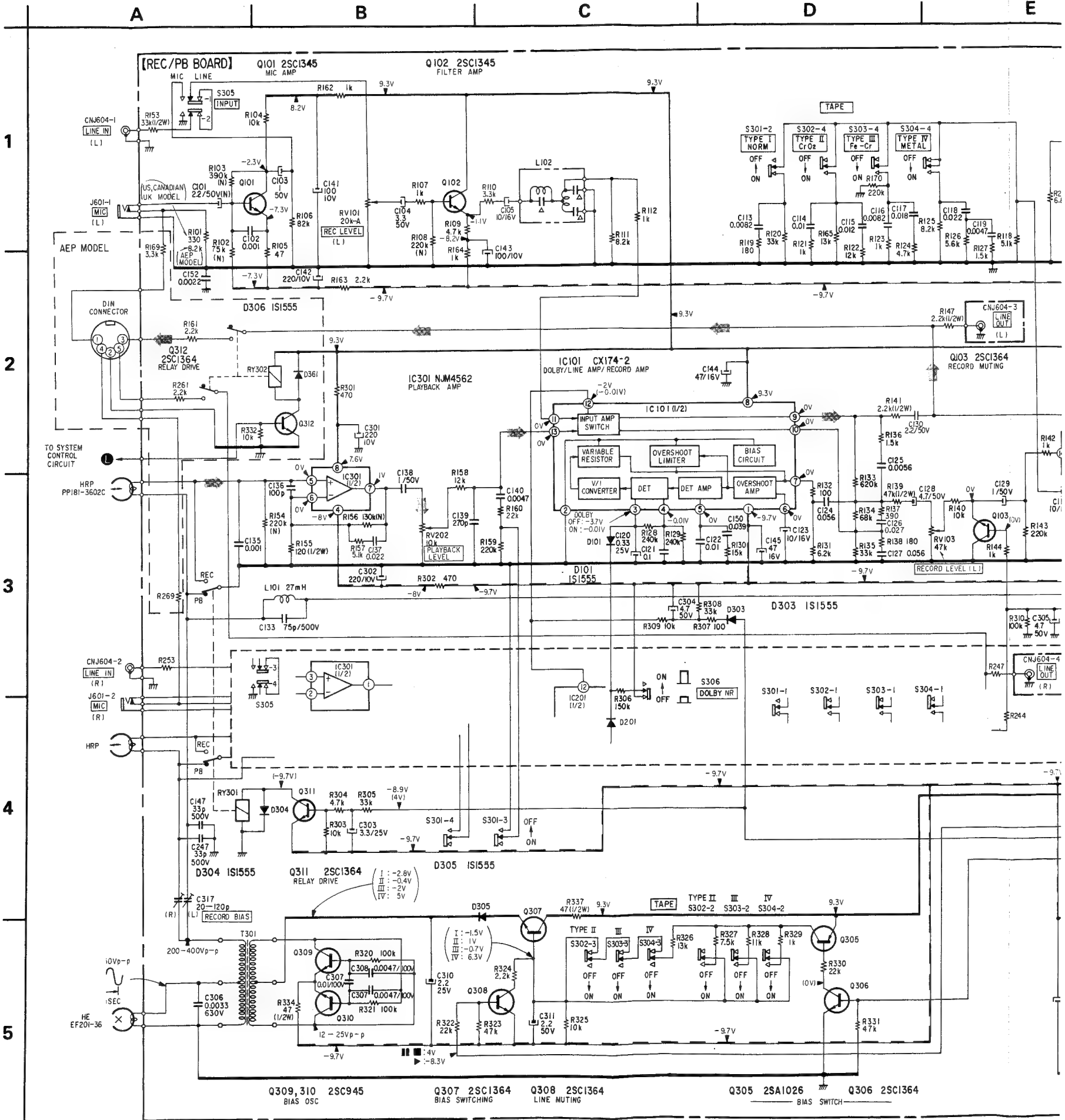
**Note:** The components identified by shading and mark  are critical for safety. Replace only with part number specified.

**Note:** Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

4-3. SCHEMATIC DIAGRAM  
— Audio Amp Section —

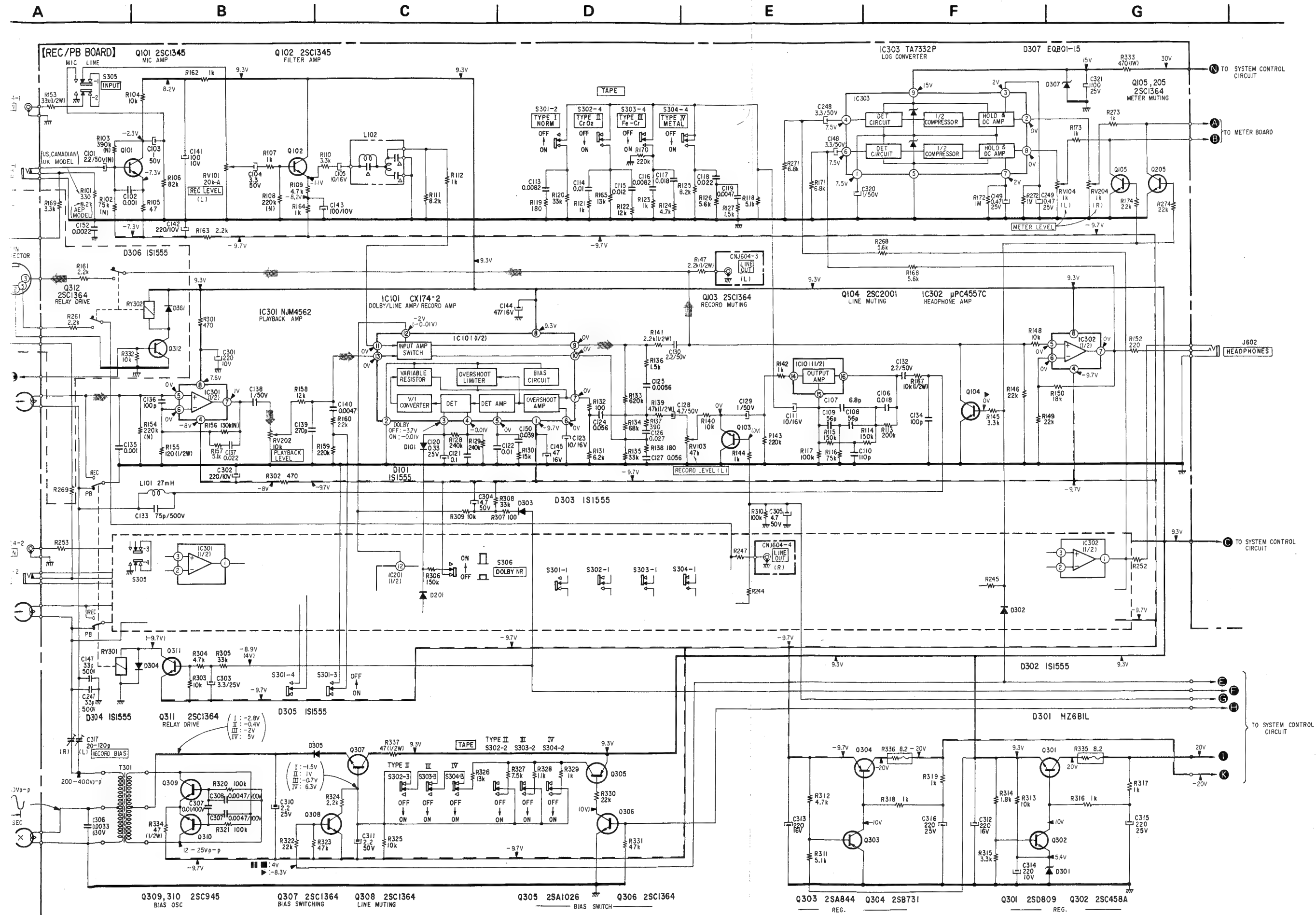
- Note:
- Components for right channel have same values as for left channel. Reference numbers are coded from 200.
  - All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$  :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in ohms,  $\frac{1}{4}\text{W}$  unless otherwise noted.  $\text{k}\Omega$  : 1000  $\Omega$ ,  $\text{M}\Omega$  : 1000  $\text{k}\Omega$
  - : nonflammable resistor.
  - : fusible resistor.
  - : signal path
  - : adjustment for repair.
  - : B+ bus.
  - : B- bus.
  - Voltages are dc with respect to ground unless otherwise noted.
  - Readings are taken under no-signal conditions with a VOM (20  $\text{k}\Omega/\text{V}$ ).  
no mark : STOP  
( ) : REC  
■ : STOP  
▼ : FWD  
▲ : REW  
▶ : FF  
● : REC  
■ : PAUSE
  - Voltage variations may be noted due to normal production tolerances.
  - Switches

Ref. No.	Switch	Position
S301-304	TAPE	NORMAL
S305	INPUT	LINE
S306	DOLBY	OFF





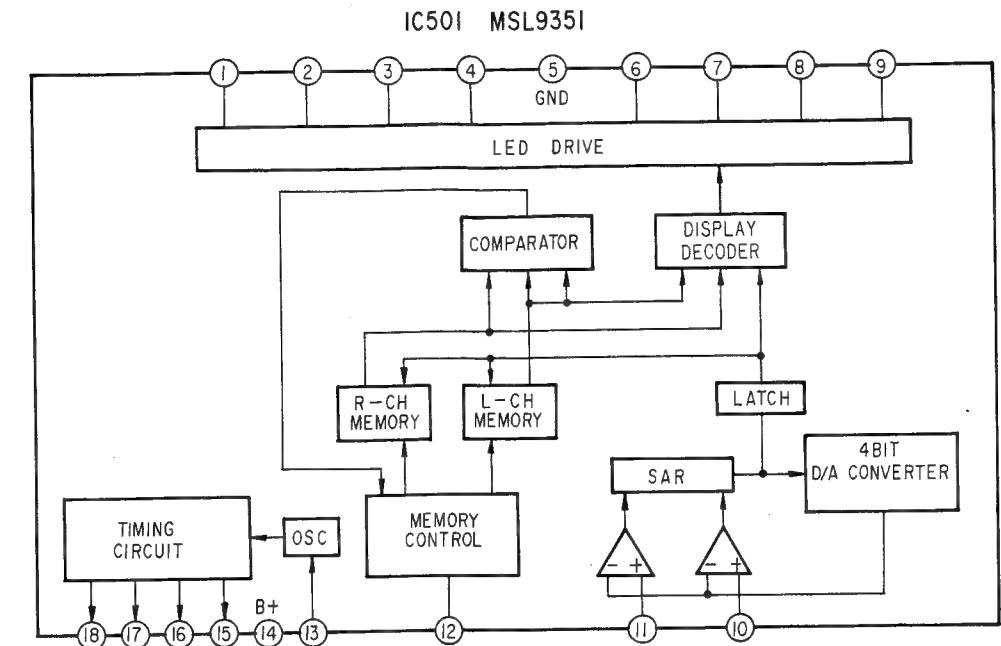
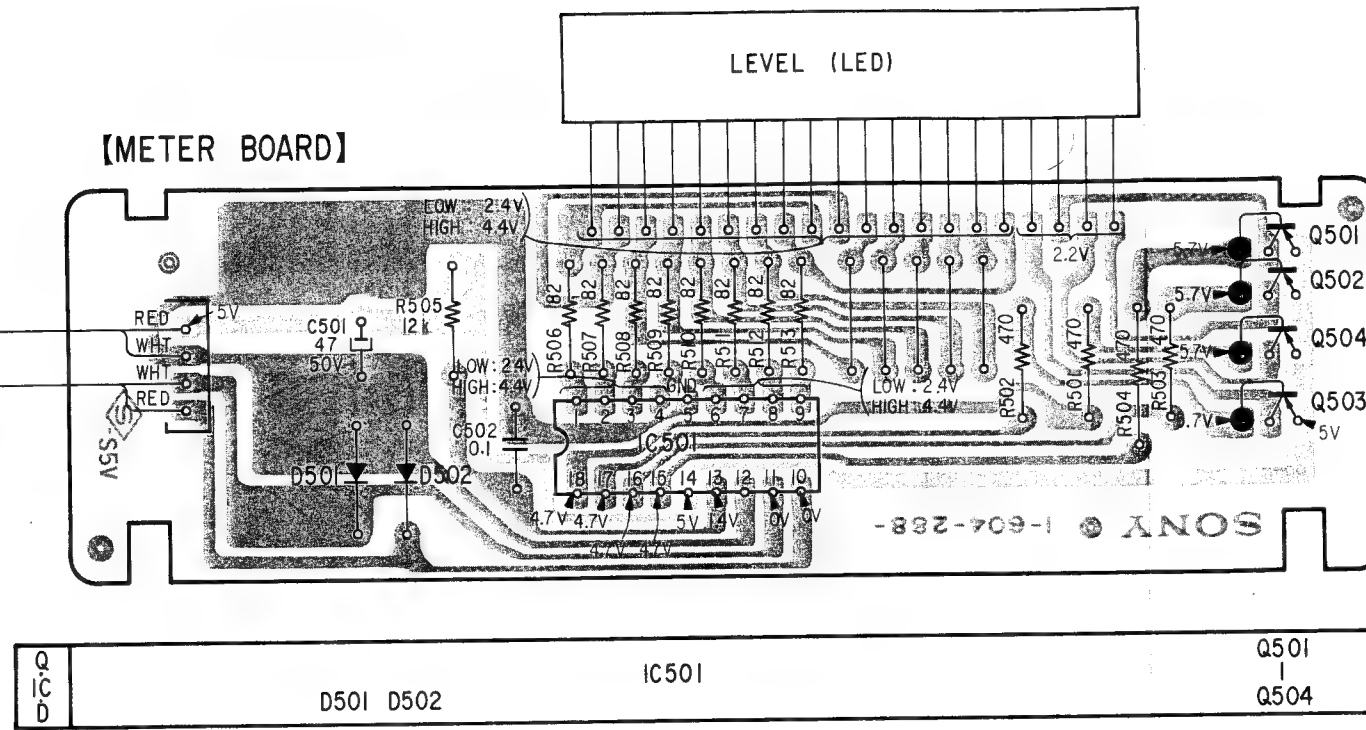
# TC-FX4 TC-FX4



4-4. Meter Drive Section

1

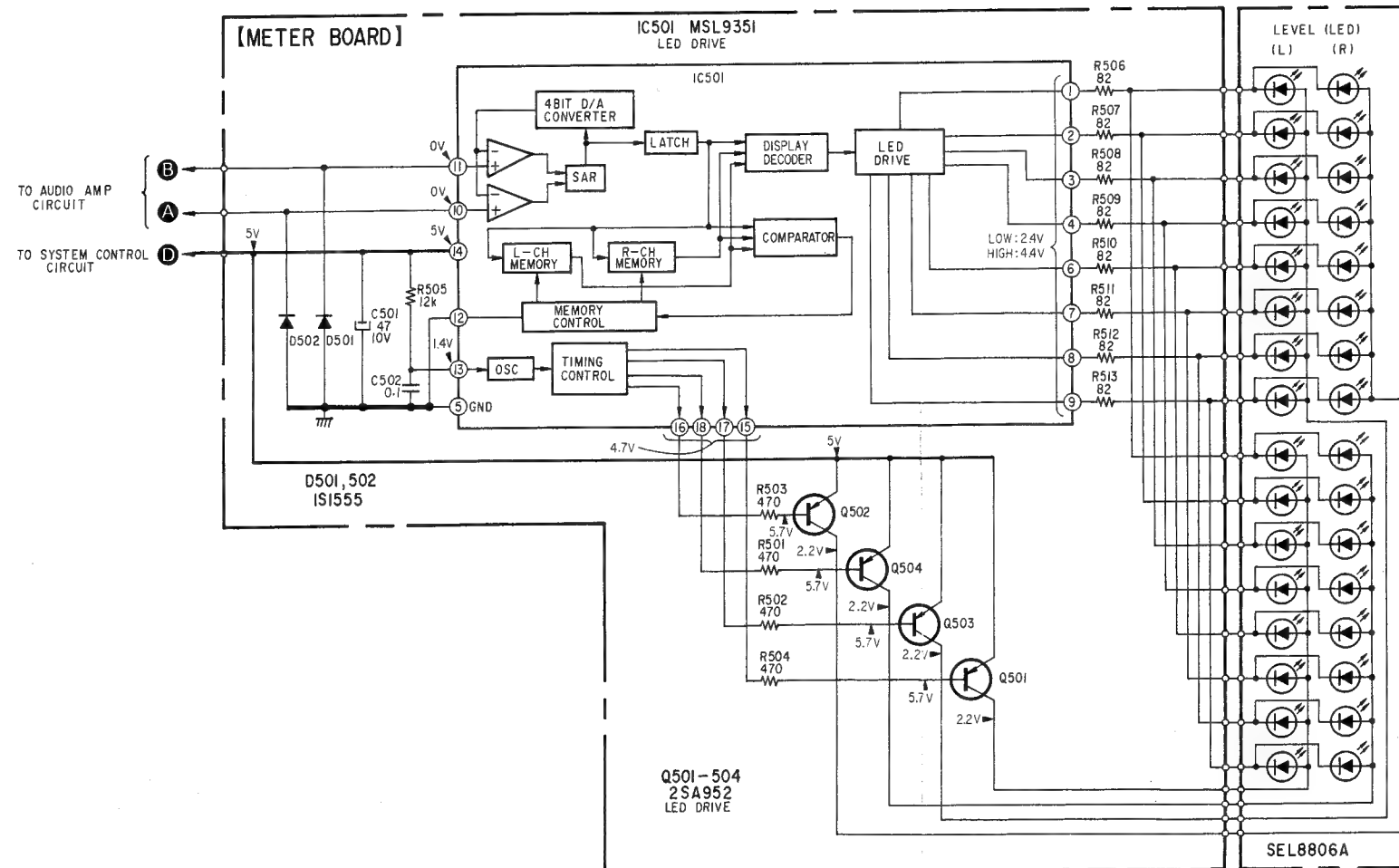
2



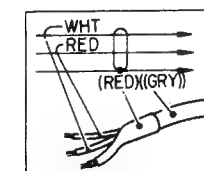
3

4

5



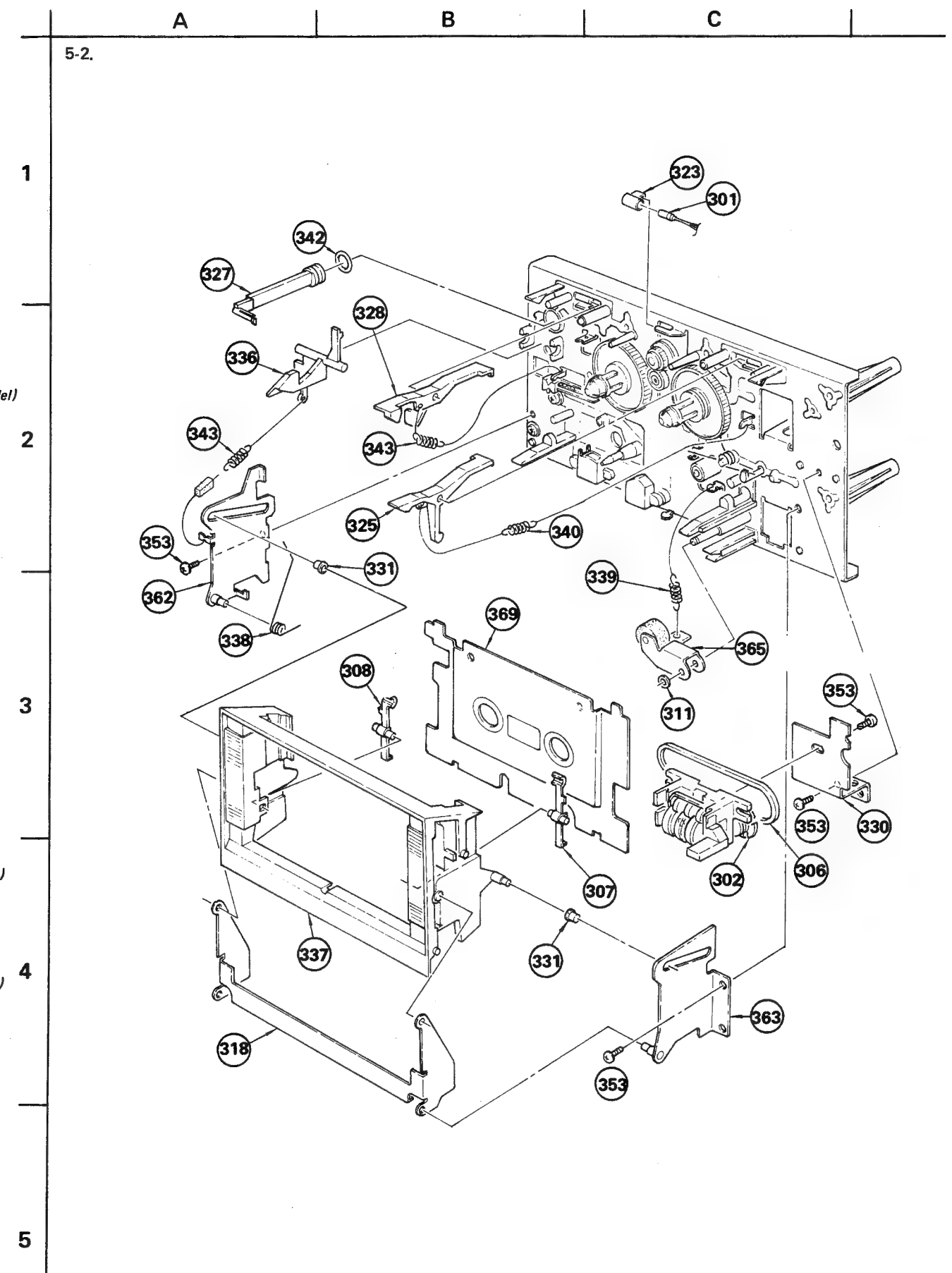
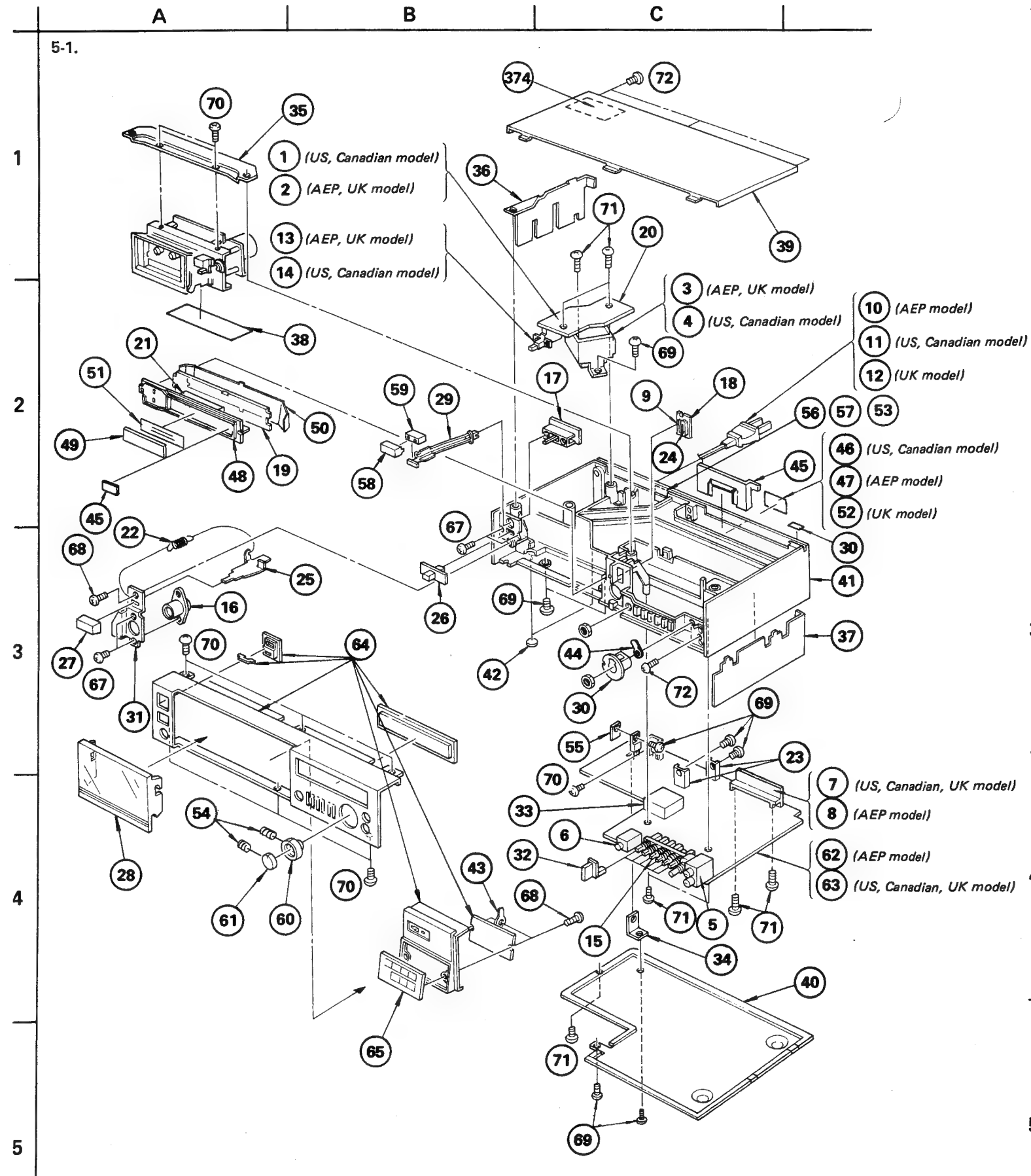
Note:  
• Color code of sleeving over the end of the jacket.



• : B+ pattern

Note:  
• All capacitors are in  $\mu F$  unless otherwise noted.  $pF$  :  $\mu F$   
50WV or less are not indicated except for electrolytics and tantalums.  
• All resistors are in ohms,  $\frac{1}{4}W$  unless otherwise noted.  
 $k\Omega$  : 1000  $\Omega$ ,  $M\Omega$  : 1000  $k\Omega$   
• : B+ bus.  
• Voltages are dc with respect to ground unless otherwise noted.  
• Readings are taken under no-signal conditions with a VOM (20  $k\Omega/V$ ).  
• Voltage variations may be noted due to normal production tolerances.

SECTION 5  
EXPLODED VIEWS AND PARTS LIST



5-3.

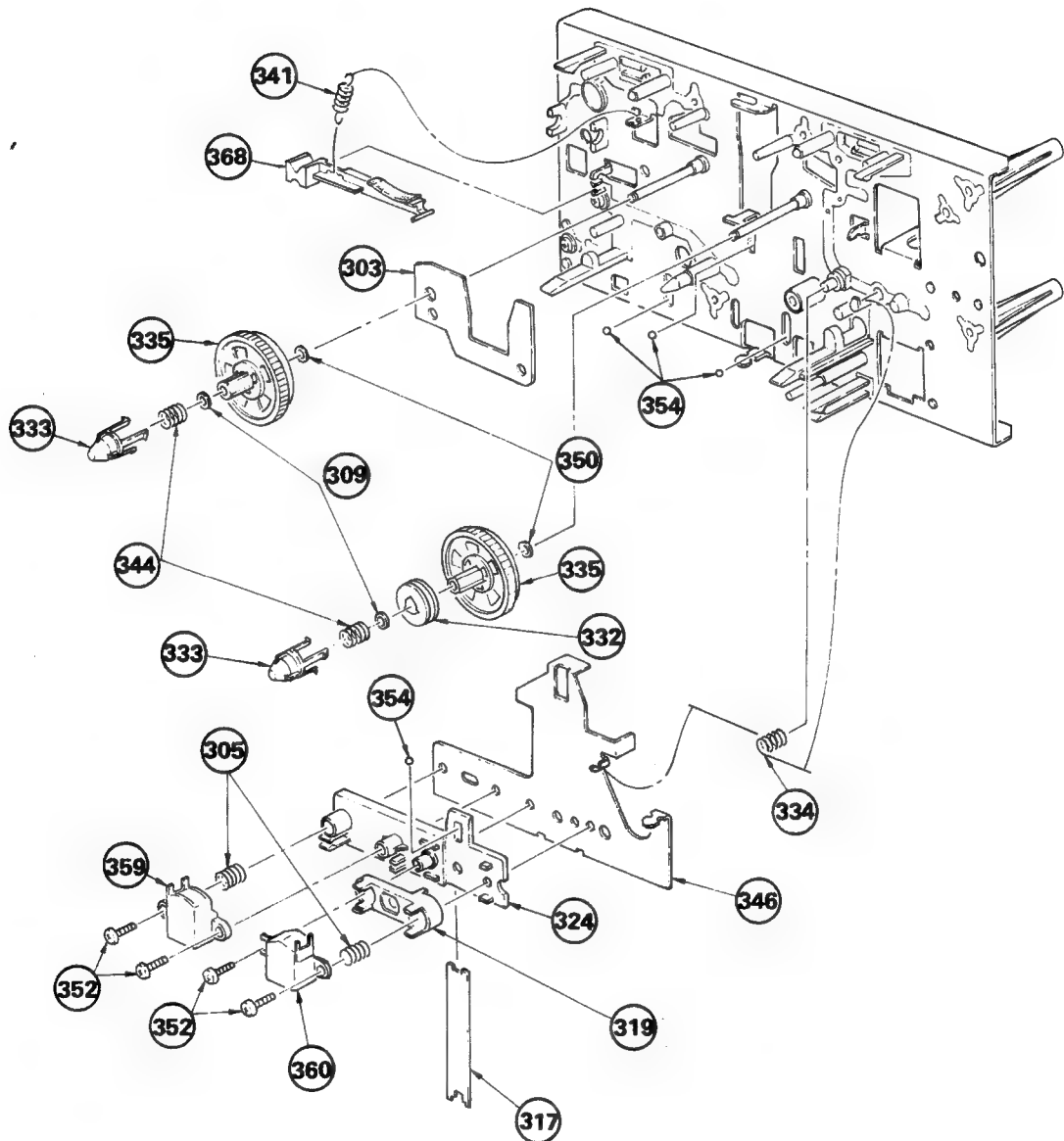
1

2

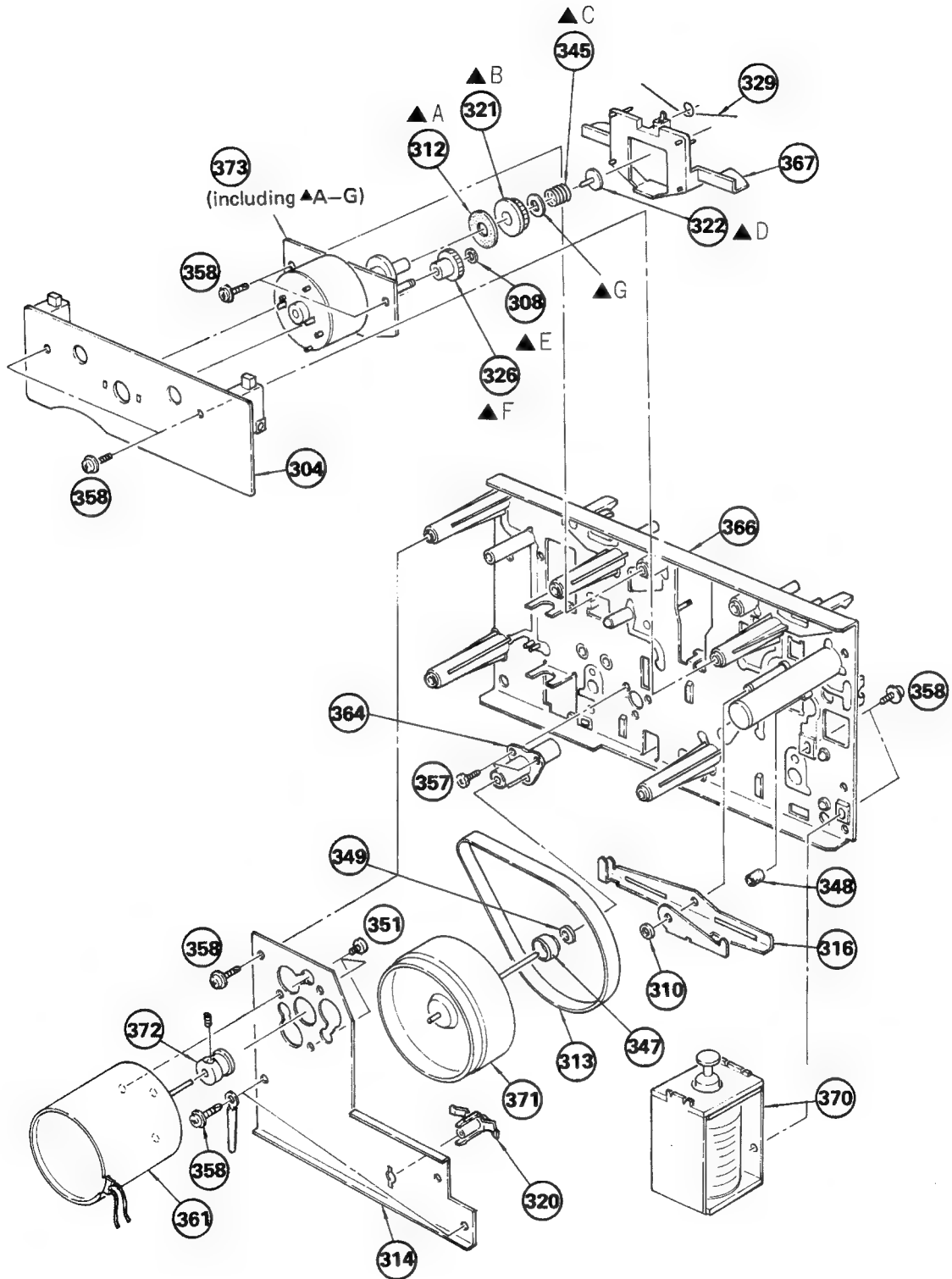
3

4

5



5-4.



## GENERAL SECTION

No.	Part No.	Description
1	△.1-161-749-00	CERAMIC 0.01MF 125V*** (US,CND)
2	△.1-161-744-00	CERAMIC 0.01MF 400V*** (AEP,UK)
3	△.1-446-916-00	TRANSFORMER, POWER*** (AEP,UK)
4	△.1-446-922-00	TRANSFORMER, POWER*** (US,CND)
5	1-507-525-00	JACK, (MIC)
6	1-507-553-00	JACK (HEAD PHONE)
7	1-507-717-00	JACK, PIN 4P*** (US,CND,UK)
8	1-507-716-00	JACK, PIN 4P*** (AEP)
9	1-518-351-00	LAMP, PILOT
10	△.1-534-817-XX	CORD, POWER*** (AEP)
11	△ 1-534-986 XX	CORD, POWER*** (US,CND)
12	△ 1-551-963-XX	CORD, POWER*** (UK)
13	△ 1-553-318-00	SWITCH, PUSH (AC POWER)*** (AEP,UK)
14	△ 1-553-319-00	SWITCH, PUSH (AC POWER)*** (US,CND)
15	1-553-581-00	SWITCH, PUSH (S 301-401)
16	1-561-293-00	SOCKET (4P)
17	♣;1-604-287-00	PC BOARD, SW
18	♣;1-604-288-00	PC BOARD, LAMP
19	♣;1-604-282-00	PC BOARD, LED METER
20	♣;1-604-289-00	PC BOARD, POWER
21	1-806-076-11	DIODE (LEVEL METER) SEL8806A
22	3-534-275-00	SPRING, TENSION
23	♣;3-567-307-00	HEAT SINK (35)
24	♣;3-574-128-00	REFLECTOR, METER
25	♣;3-575-501-00	SLIDER, EJECT
26	3-575-515-00	KNOB, SLIDE SWITCH
27	3-575-533-00	BUTTON, EJECT
28	3-575-546-11	WINDOW, CASSETTE
29	3-576-316-00	ROD (B), POWER SWITCH
30	3-576-702-00	PLATE, ORNAMENTAL, KNOB, REC
31	♣;3-576-703-00	BRACKET, JACK, REMOTE CONTROL
32	3-576-704-11	KNOB, SELECT, TAPE
33	♣;3-576-710-00	PLATE, SHIELD, AUDIO
34	♣;3-576-711-00	BRACKET, TRANSISTOR
35	♣;3-576-716-00	BRACKET (UPPER), MECHANISM
36	♣;3-576-718-00	PLATE, SHIELD (LEFT)
37	♣;3-576-719-00	PLATE, SHIELD (RIGHT)
38	♣;3-576-721-00	PLATE, SHIELD, HEAD
39	3-576-723-00	CASE
40	♣;3-576-726-00	PLATE, BOTTOM
41	3-576-727-11	CHASSIS
42	3-576-731-00	FELT (H)
43	3-576-732-00	SPRING, LEAF, ELECTROSTATIC
44	3-576-733-00	SPRING, LEAF, PANEL
45	♣;3-576-737-00	PLATE, SHIELD, INPUT OUTPUT

### NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "♣" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (△-△△△-△△△-XX or △-△△△-△△△-X) may be different from those used in the set.

### CAPACITORS:

- All capacitors are in  $\mu F$ . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:  $\mu F$ , PF:  $\mu \mu F$ .

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

### COILS

- MMH : mH, UH :  $\mu H$

## GENERAL SECTION

No.	Part No.	Description
46	3-576-738-00	LABEL, MODEL NUMBER*** (US,CND)
47	3-576-740-00	LABEL, MODEL NUMBER*** (AEP)
48	♣;3-576-741-00	ESCUTCHEON (LED), METER
49	♣;3-576-742-00	ILLUMINATOR (LED), METER
50	3-576-743-00	PLATE, SHIELD, LED
51	3-576-744-00	PLATE, ORNAMENTAL (LED), METER
52	3-576-745-00	LABEL, MODEL NUMBER*** (UK)
53	3-576-940-00	LABEL, BEAD*** (UK)
54	3-701-506-01	SET SCREW, DOUBLE POINT 3X4
55	3-703-037-00	INSULATOR, TO-220
56	3-703-043-21	LABEL, CAUTION, MAIN*** (US,CND,UK)
57	3-703-079-21	LABEL, COURTION (BACK)*** (US,CND,UK)
58	4-871-322-01	CAP, POWER KNOB
59	4-871-323-00	BASE, POWER KNOB
60	X-3576-703-0	KNOB (L) ASSY, REC
61	X-3576-704-0	KNOB (R) ASSY, REC
62	♣;A-2010-192-A	MOUNTED PCB, RECORD/PLAYBACK*** (AEP)
63	♣;A-2010-191-A	MOUNTED PCB, RECORD/PLAYBACK*** (US,CND,UK)
64	X-3576-705-1	PANEL ASSY, FRONT*** (US,CND,UK)
64	X-3576-706-1	PANEL ASSY, FRONT*** (AEP)
65	A-2145-043-A	BUTTON ASSY, CONTROL
66	7-621-773-95	SCREW +B 2.6X4
67	7-621-775-20	SCREW +B 2.6X5
68	7-685-534-29	SCREW +BTP 2.6X8
69	7-685-871-01	SCREW +BVTT 3X6
70	7-685-246-29	SCREW +KTP 3X8
71	7-685-647-21	SCREW +BVTP 3X10
72	7-685-847-01	SCREW +BVTT 3X12
73	7-685-650-21	SCREW +BVTP 3X16

## ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
81	1-551-734-11	CORD, CONNECTION (RK- 74A)
82	3-576-748-00	CARTON
83	3-576-749-00	CUSHION (L)
84	3-576-750-00	CUSHION (R)
85	3-701-630-00	BAG, POLYETHYLENE
86	3-783-472-11	MANUAL, INSTRUCTION
87	3-793-828-11	QUESTIONNAIRE
88	4-866-723-00	SHEET
89	8-890-435-10	TAPE (FECR 46)*** (CND)
90	X-3701-105-0	ROD ASSY, CLEANING, HEAD

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## MECHANISM SECTION

No.	Part No.	Description
301	▲;1-518-313-00	LAMP, PILOT
302	1-548-536-41	COUNTER
303	▲;1-603-823-00	PC BOARD, PHOTO
304	▲;1-604-290-00	PC BOARD, MD
305	3-481-272-00	SPRING, COMPRESSION
306	3-532-213-00	BELT, COUNTER
307	3-555-113-00	SPRING (R)
308	3-555-114-00	SPRING (L)
309	3-558-708-01	WASHER, STOPPER
310	3-558-708-11	WASHER, STOPPER
311	3-558-708-21	WASHER, STOPPER
312	3-564-027-11	FELT, LIMITER
313	3-564-319-00	BELT, CAPSTAN
314	▲;3-575-302-00	RETAINER, THRUST
315	*****	
316	▲;3-575-307-00	LEVER, FWD
317	▲;3-575-312-00	SPRING
318	▲;3-575-314-00	LEVER, FULCRUM, HOLDER
319	3-575-320-00	BASE, ADJUSTMENT, HEAD
320	3-575-321-00	RETAINER, THRUST, CAPSTAN
321	3-575-324-00	GEAR, LIMITER
322	3-575-327-00	STOPPER
323	3-575-328-00	HOLDER, LAMP
324	3-575-330-00	BRACKET, HEAD
325	▲;3-575-331-00	LEVER, DETECTION, HALF
326	3-575-332-00	GEAR, FR
327	3-575-333-00	PISTON
328	▲;3-575-334-00	LEVER, DETECTION, REC
329	3-575-345-00	SPRING
330	▲;3-575-347-00	BRACKET, COUNTER
331	3-575-348-00	ROLLER, GUIDE, THREADING
332	3-575-349-00	PULLEY, CB
333	3-575-350-00	CLAW, REEL TABLE
334	3-575-351-00	SPRING
335	3-575-353-00	TABLE, REEL
336	3-575-354-00	LEVER, LOCK
337	3-575-355-00	HOLDER, CASSETTE
338	3-575-356-00	SPRING
339	3-575-357-00	SPRING, TENSION
340	3-575-358-00	SPRING, TENSION
341	3-575-359-00	SPRING, TENSION
342	3-575-360-00	RING, O
343	3-575-364-00	SPRING, TENSION
344	3-575-365-00	SPRING, COMPRESSION
345	3-575-368-00	SPRING, COMPRESSION

## MECHANISM SECTION

No.	Part No.	Description
346	3-575-383-00	CHASSIS, HEAD
347	3-576-734-00	WASHER, CAPSTAN
348	3-652-612-11	CUSHION (B)
349	3-701-438-21	WASHER
350	3-701-439-21	WASHER
351	7-621-259-15	SCREW +P 2.6X3
352	7-621-772-70	SCREW +B 2X14
353	7-621-775-10	SCREW +B 2.6X4
354	7-671-112-11	BALL, STEEL
355	7-682-949-01	SCREW +PSW 3X10
356	7-685-534-29	SCREW +BTP 2.6X8 TYPE2 N-S
357	7-685-861-01	SCREW +BVT 2.6X5 (S)
358	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
359	8-825-724-00	HEAD, ERASE EF-201-36
360	8-829-373-30	HEAD, REC/PB (PP181-3602C)
361	8-835-049-01	MOTOR, DC (DNE-4100A)
362	▲;X-3575-301-0	PLATE (A) ASSY, HOLDER FULCRUM
363	▲;X-3575-302-0	PLATE (B) ASSY, HOLDER FULCRUM
364	X-3575-303-0	METAL ASSY, CAPSTAN
365	X-3575-304-0	PINCH LEVER (T) ASSY
366	▲;X-3575-306-0	CHASSIS ASSY, MECHANISM
367	X-3575-309-0	PLATE ASSY, BRAKE
368	X-3575-310-0	LEVER ASSY, TENSION, BACK
369	X-3575-314-0	PLATE ASSY, ORNAMENTAL
370	X-3575-316-0	SOLENOID ASSY
371	X-3575-318-0	FLYWHEEL (D) ASSY
372	X-3575-328-1	PULLEY ASSY, MOTOR
373	X-3575-313-0	MOTOR ASSY, REEL
374	3-572-384-00	PLATE, INSULATOR

### NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (▲-△△△-△△△-XX or ▲-△△△△-△△△-X) may be different from those used in the set.

### CAPACITORS:

- All capacitors are in  $\mu$ F. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: $\mu$ F, PF: $\mu$ F.

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

### COILS

- MMH : mH, UH :  $\mu$ H

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## ELECTRICAL PARTS

Ref.No.	Part No.	Description	
C401	Δ.1-123-349-00	ELECT 1000MF	35V
C402	Δ.1-123-324-00	ELECT 2200MF	16V
C403	Δ.1-123-337-00	ELECT 1000MF	25V
C404	Δ.1-123-337-00	ELECT 1000MF	25V
C601	Δ.1-123-485-00	ELECT 220MF	16V
D101	8-719-815-55	DIODE 1S1555	
D201	8-719-815-55	DIODE 1S1555	
D301	8-719-990-64	DIODE HZ6B1L	
D302	8-719-815-55	DIODE 1S1555	
D303	8-719-815-55	DIODE 1S1555	
D304	8-719-815-55	DIODE 1S1555	
D305	8-719-815-55	DIODE 1S1555	
D307	8-719-931-15	DIODE EQB01-15	
D401	Δ.8-719-200-02	DIODE 10E-2	
D402	Δ.8-719-200-02	DIODE 10E-2	
D403	Δ.8-719-200-02	DIODE 10E-2	
D404	Δ.8-719-200-02	DIODE 10E-2	
D405	Δ.8-719-200-02	DIODE 10E-2	
D406	Δ.8-719-200-02	DIODE 10E-2	
D407	Δ.8-719-200-02	DIODE 10E-2	
D408	Δ.8-719-200-02	DIODE 10E-2	
D409	8-719-910-69	DIODE HZ6C3L	
D410	8-719-815-55	DIODE 1S1555	
D411	8-719-815-55	DIODE 1S1555	
D412	8-719-200-02	DIODE 10E-2	
D413	8-719-815-55	DIODE 1S1555	
D414	8-719-815-55	DIODE 1S1555	
D415	8-719-815-55	DIODE 1S1555	
D416	8-719-815-55	DIODE 1S1555	
D417	8-719-815-55	DIODE 1S1555	
D418	8-719-200-02	DIODE 10E-2	
D419	8-719-815-55	DIODE 1S1555	
D501	8-719-815-55	DIODE 1S1555	
D502	8-719-815-55	DIODE 1S1555	
D601	8-719-815-55	DIODE 1S1555	
D802	8-719-904-32	DIODE PG3432SX	
D801	8-719-934-32	DIODE AR3432S	
D803	8-719-934-34	DIODE AA3432S	
IC101	8-759-100-02	IC CX-174-2	
IC201	8-759-100-02	IC CX-174-2	
IC301	8-759-705-62	IC NJM4562D-M	
IC302	8-759-145-57	IC UPC4557C	
IC303	8-759-273-32	IC TA7332P	
IC401	8-759-908-36	IC MSM5836	
IC402	8-759-729-03	IC NJM2903D	
IC403	8-759-133-90	IC UPC339C	
IC501	8-759-993-51	IC MSL9351	
L101	1-408-262-00	MICRO INDUCTOR 27MMH	
L102	1-231-388-00	FILTER, LOWPASS	
L201	1-408-262-00	MICRO INDUCTOR 27MMH	
L202	1-231-388-00	FILTER, LOWPASS	

## ELECTRICAL PARTS

Ref.No.	Part No.	Description	
Q101	8-729-334-58	TRANSISTOR 2SC1345	
Q102	8-729-334-58	TRANSISTOR 2SC1345	
Q103	8-729-663-47	TRANSISTOR 2SC1364	
Q104	8-729-100-13	TRANSISTOR 2SC2001	
Q105	8-729-663-47	TRANSISTOR 2SC1364	
Q201	8-729-334-58	TRANSISTOR 2SC1345	
Q202	8-729-334-58	TRANSISTOR 2SC1345	
Q203	8-729-663-47	TRANSISTOR 2SC1364	
Q204	8-729-100-13	TRANSISTOR 2SC2001	
Q205	8-729-663-47	TRANSISTOR 2SC1364	
Q301	8-729-180-93	TRANSISTOR 2SD809	
Q302	8-729-300-37	TRANSISTOR 2SC458A	
Q303	8-729-384-47	TRANSISTOR 2SA844	
Q304	8-729-173-13	TRANSISTOR 2SB731	
Q305	8-729-384-47	TRANSISTOR 2SA844	
Q306	8-729-663-47	TRANSISTOR 2SC1364	
Q307	8-729-663-47	TRANSISTOR 2SC1364	
Q308	8-729-663-47	TRANSISTOR 2SC1364	
Q309	8-729-663-47	TRANSISTOR 2SC1364	
Q310	8-729-663-47	TRANSISTOR 2SC1364	
Q311	8-729-663-47	TRANSISTOR 2SC1364	
Q401	8-729-288-02	TRANSISTOR 2SD880	
Q402	8-729-186-23	TRANSISTOR 2SD862	
Q403	8-729-880-82	TRANSISTOR 2SB808	
Q404	8-729-880-82	TRANSISTOR 2SB808	
Q405	8-729-801-22	TRANSISTOR 2SD1012	
Q406	8-729-801-22	TRANSISTOR 2SD1012	
Q407	8-729-103-43	TRANSISTOR 2SB734	
Q408	8-729-663-47	TRANSISTOR 2SC1363	
Q409	8-729-102-03	TRANSISTOR 2SD1020	
Q410	8-729-612-77	TRANSISTOR 2SA1027R	
Q411	8-729-663-47	TRANSISTOR 2SC1364	
Q412	8-729-612-77	TRANSISTOR 2SA1027R	
Q413	8-729-663-47	TRANSISTOR 2SC1363	
Q414	8-729-663-47	TRANSISTOR 2SC1364	
Q501	8-729-195-23	TRANSISTOR 2SA952	
Q502	8-729-195-23	TRANSISTOR 2SA952	
Q503	8-729-195-23	TRANSISTOR 2SA952	
Q504	8-729-195-23	TRANSISTOR 2SA952	
Q601	8-729-663-47	TRANSISTOR 2SC1364	
Q803	8-729-101-02	TRANSISTOR PH102	
R141	1-244-881-00	CARBON 2.2K 5% 1/2W	
R147	1-244-881-00	CARBON 2.2K 5% 1/2W	
R153	1-244-909-00	CARBON 33K 5% 1/2W	
R155	1-244-851-00	CARBON 120 5% 1/2W	
R167	1-244-897-00	CARBON 10K 5% 1/2W	
R241	1-244-881-00	CARBON 2.2K 5% 1/2W	
R247	1-244-881-00	CARBON 2.2K 5% 1/2W	
R253	1-244-909-00	CARBON 33K 5% 1/2W	
R255	1-244-851-00	CARBON 120 5% 1/2W	
R267	1-244-897-00	CARBON 10K 5% 1/2W	

### NOTE:

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- Items marked "Δ" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

### CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF:μF, PF:μμF.

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

### COILS

- MMH : mH, UH : μH

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



## ELECTRICAL PARTS

Ref.No.	Part No.	Description
R333	1-213-139-00	METAL 470 5% 1W F
R334	1-244-841-00	CARBON 47 5% 1/2W
R335	△.1-212-855-00	FUSIBLE 8.2 5% 1/4W F
R336	△.1-212-855-00	FUSIBLE 8.2 5% 1/4W F
R401	△.1-244-855-00	CARBON 180 5% 1/2W
R402	△.1-244-855-00	CARBON 180 5% 1/2W
R403	△.1-244-881-00	CARBON 2.2K 5% 1/2W
R461	△.1-212-849-00	FUSIBLE 4.7 5% 1/4W F
RV101	1-228-250-00	RES, VAR 20K/20K .....(RV101/201)
RV102	1-224-645-XX	RES, ADJ, CARBON 10K
RV103	1-224-647-XX	RES, ADJ, CARBON 47K
RV104	1-226-233-00	RES, ADJ, CARBON 1K
RV202	1-224-645-XX	RES, ADJ, CARBON 10K
RV203	1-224-647-XX	RES, ADJ, CARBON 47K
RV204	1-226-233-00	RES, ADJ, CARBON 1K
RY301	1-515-323-00	RELAY
RY302	1-515-297-00	RELAY ***(AEP)
S503	1-552-809-00	SWITCH, SLIDE
S601	1-552-532-00	SWITCH, PUSH
S602	1-552-532-00	SWITCH, PUSH
T301	1-433-235-00	COIL, BIAS OSCILLATOR

### NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "△" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (△-△△△-△△△-XX or △-△△△△-△△△-X) may be different from those used in the set.

### CAPACITORS:

- All capacitors are in  $\mu\text{F}$ . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:  $\mu\text{F}$ , PF:  $\mu\text{pF}$ .

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

### COILS

- MMH : mH, UH :  $\mu\text{H}$

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

**ELECTROLYTIC CAPACITORS**

CAP. (μF)	RATING → : Use the high voltage rated one.					
	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47					→	1-121-726-00
1.0					→	1-121-391-00
2.2					→	1-121-450-00
3.3	→	→	→	1-121-392-00	→	1-121-393-00
4.7	→	→	→	1-121-395-00	→	1-121-396-00
10	→	→	1-121-651-00	1-121-398-00	→	1-121-738-00
22	→	→	1-121-479-00	1-121-480-00	1-121-662-00	1-121-152-00
33	→	→	1-121-403-00	1-121-404-00	1-121-652-00	1-121-405-00
47	→	1-121-352-00	1-121-409-00	1-121-410-00	1-121-653-00	1-121-411-00
100	→	1-121-414-00	1-121-415-00	1-121-416-00	1-121-357-00	1-121-417-00
220	1-121-419-00	1-121-420-00	1-121-421-00	1-121-422-00	1-121-261-00	1-121-423-00
330	1-121-751-00	1-121-805-00	1-121-521-00	1-121-654-00	1-121-655-00	1-121-656-00
470	1-121-424-00	1-121-425-00	1-121-426-00	1-121-733-00	1-121-361-00	1-121-810-00
1000	—	1-121-736-00	1-121-245-00	1-121-657-00	1-121-388-00	1-123-061-00
2200	1-121-658-00	1-121-659-00	1-121-660-00	1-123-067-00	1-121-984-00	—
3300	1-121-661-00	1-123-075-00	1-123-071-00	—	—	—

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	—	—	—	—
1.0	1-123-249-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-250-00	1-123-026-00	—	1-123-028-00
3.3	1-121-995-00	—	1-123-004-00	1-123-006-00
4.7	1-123-255-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-121-126-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-121-996-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-121-997-00	1-121-757-00	—	—
47	1-123-251-00	1-121-919-00	—	—
100	1-123-084-00	—	—	—

**CERAMIC CAPACITORS**

RATING							
CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

0.001μF = 1,00pF

**CERAMIC (SEMICONDUCTOR) CAPACITORS**

RATING → : Use the high voltage rated one.					
CAP. (μF)	25 VOLT.	50 VOLT.	CAP. (μF)	25 VOLT.	50 VOLT.
	PART No.	PART No.		PART No.	PART No.
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00
0.0033	→	1-161-045-00	0.056	→	1-161-060-00
0.0039	→	1-161-046-00	0.068	→	1-161-061-00
0.0047	→	1-161-047-00	0.082	1-161-024-00	1-161-062-00
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00
0.0068	→	1-161-049-00			
0.0082	1-161-012-00	1-161-050-00			
0.01	1-161-013-00	1-161-051-00			
0.012	→	1-161-052-00			
0.015	1-161-015-00	1-161-053-00			

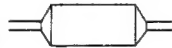
## MYLAR CAPACITORS

RATING											
CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.
	PART No.	PART No.	PART No.		PART No.	PART No.	PART No.		PART No.	PART No.	PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00	—	—
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	—	—
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00	—	—
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	—	—
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				



## TANTALUM CAPACITORS

RATING → : Use the high voltage rated one.							
CAP. (μF)	3.15 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	25 VOLT.	35 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.01					→	→	1-131-396-00
0.015						→	1-131-397-00
0.022						→	1-131-398-00
0.033						→	1-131-399-00
0.047						→	1-131-400-00
0.068					→	→	1-131-401-00
0.1					→	→	1-131-402-00
0.15					→	→	1-131-403-00
0.22					→	→	1-131-404-00
0.33					→	1-131-409-00	1-131-405-00
0.47	—	—	—	—	1-131-412-00	→	1-131-406-00
0.68	—	—	—	1-131-415-00	→	1-131-410-00	1-131-407-00
1.0	—	—	1-131-418-00	—	1-131-413-00	→	1-131-408-00
1.5	—	1-131-421-00	—	1-131-416-00	→	1-131-411-00	1-131-348-00
2.2	1-131-424-00	—	1-131-419-00	—	1-131-414-00	1-131-355-00	1-131-349-00
3.3	—	1-131-422-00	—	1-131-417-00	1-131-362-00	1-131-356-00	1-131-350-00
4.7	1-131-425-00	—	1-131-420-00	1-131-369-00	1-131-363-00	1-131-357-00	1-131-351-00
6.8	—	1-131-423-00	1-131-376-00	1-131-370-00	1-131-364-00	1-131-358-00	1-131-352-00
10	1-131-426-00	1-131-383-00	1-131-377-00	1-131-371-00	1-131-365-00	1-131-359-00	1-131-353-00
15	1-131-390-00	1-131-384-00	1-131-378-00	1-131-372-00	1-131-366-00	1-131-360-00	—
22	1-131-391-00	1-131-385-00	1-131-379-00	1-131-373-00	1-131-367-00		
33	1-131-392-00	1-131-386-00	1-131-380-00	1-131-374-00			
47	1-131-393-00	1-131-387-00	1-131-381-00	—			
68	1-131-394-00	1-131-388-00	—	—			
100	1-131-395-00	—	—	—			



## TANTALUM CAPACITORS

RATING						
CAP. (μF)	3 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	35 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.033						1-131-273-00
0.047						1-131-274-00
0.068						1-131-275-00
0.1						1-131-276-00
0.15						1-131-277-00
0.22			—	—	1-131-262-00	1-131-278-00
0.33			—	—	1-131-263-00	1-131-279-00
0.47			1-131-169-00	—	1-131-264-00	1-131-280-00
0.68			—	1-131-258-00	1-131-265-00	1-131-281-00
1.0			1-131-254-00	—	1-131-266-00	1-131-282-00
1.5		1-131-250-00	—	—	1-131-267-00	1-131-283-00
2.2		—	—	1-131-259-00	1-131-268-00	1-131-284-00
3.3		—	1-131-255-00	—	1-131-269-00	—
4.7		1-131-251-00	1-131-171-00	—	1-131-270-00	—
6.8		—	—	1-131-260-00	1-131-271-00	—
10	—	—	1-131-256-00	—	1-131-272-00	—
15	—	1-131-252-00	—	1-131-261-00		
22	—	—	1-131-257-00	—		
33	1-131-176-00	1-131-253-00	1-131-173-00	—		
47	1-131-288-00	1-131-174-00	—	—		
100	1-131-177-00	—	—	—		

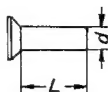
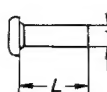
## 1/8 WATT CARBON RESISTOR

$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.
2.0	—	13	1-246-821-00	91	1-246-831-00	620	1-246-841-00	4.3k	1-246-851-00	30k	1-246-861-00	200k	1-246-871-00
2.2	1-246-751-00	15	1-246-761-00	100	1-246-771-00	680	1-246-781-00	4.7k	1-246-791-00	33k	1-246-801-00	220k	1-246-811-00
2.4	—	16	1-246-822-00	110	1-246-832-00	750	1-246-842-00	5.1k	1-246-852-00	36k	1-246-862-00	240k	1-247-054-00
2.7	1-246-752-00	18	1-246-762-00	120	1-246-772-00	820	1-246-782-00	5.6k	1-246-792-00	39k	1-246-802-00	270k	1-247-046-00
3.0	—	20	1-246-823-00	130	1-246-833-33	910	1-246-843-00	6.2k	1-246-853-00	43k	1-246-863-00	300k	1-247-055-00
3.3	1-246-753-00	22	1-246-763-00	150	1-246-773-00	1.0k	1-246-783-00	6.8k	1-246-793-00	47k	1-246-803-00	330k	1-247-047-00
3.6	—	24	1-246-824-00	160	1-246-834-00	1.1k	1-246-844-00	7.5k	1-246-854-00	51k	1-246-864-00	360k	1-247-056-00
3.9	1-246-754-00	27	1-246-764-00	180	1-246-774-00	1.2k	1-246-784-00	8.2k	1-246-794-00	56k	1-246-804-00	390k	1-247-048-00
4.3	—	30	1-246-825-00	200	1-246-835-00	1.3k	1-246-845-00	9.1k	1-246-855-00	62k	1-246-865-00	430k	1-247-057-00
4.7	1-246-755-00	33	1-246-765-00	220	1-246-775-00	1.5k	1-246-785-00	10k	1-246-795-00	68k	1-246-805-00	470k	1-247-049-00
5.1	—	36	1-246-826-00	240	1-246-836-00	1.6k	1-246-846-00	11k	1-246-856-00	75k	1-246-866-00	510k	1-247-058-00
5.6	1-246-756-00	39	1-246-766-00	270	1-246-776-00	1.8k	1-246-786-00	12k	1-246-796-00	82k	1-246-806-00	560k	1-247-050-00
6.2	—	43	1-246-827-00	300	1-246-837-00	2.0k	1-246-847-00	13k	1-246-857-00	91k	1-246-867-00	620k	1-247-059-00
6.8	1-246-757-00	47	1-246-767-00	330	1-246-777-00	2.2k	1-246-787-00	15k	1-246-797-00	100k	1-246-807-00	680k	1-247-051-00
7.5	1-246-818-00	51	1-246-828-00	360	1-246-838-00	2.4k	1-246-848-00	16k	1-246-858-00	110k	1-246-868-00	750k	1-247-060-00
8.2	1-246-758-00	56	1-246-768-00	390	1-246-778-00	2.7k	1-246-788-00	18k	1-246-798-00	120k	1-246-808-00	820k	1-247-052-00
9.1	1-246-819-00	62	1-246-829-00	430	1-246-839-00	3.0k	1-246-849-00	20k	1-246-859-00	130k	1-246-869-00	910k	1-247-061-00
10	1-246-759-00	68	1-246-769-00	470	1-246-779-00	3.3k	1-246-789-00	22k	1-246-799-00	150k	1-246-809-00	1 M	1-247-053-00
11	1-246-820-00	75	1-246-830-00	510	1-246-840-00	3.6k	1-246-850-00	24k	1-246-860-00	160k	1-246-870-00		
12	1-246-760-00	82	1-246-770-00	560	1-246-780-00	3.9k	1-246-790-00	27k	1-246-800-00	180k	1-246-810-00		

## 1/4 WATT CARBON RESISTORS

$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.	$\Omega$	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

## DIMENSIONS AND PART NO. OF PRECISION SCREWS

<div><div><div><div><div><div></div><div>⊕ K</div></div><div>(Flat-countersunk-head screw)</div></div><div></div></div></div></div>				<div><div><div><div><div><div></div><div>⊕ P</div></div><div>(Pan-head screw)</div></div><div></div></div></div></div>				
Type	Size (mm) (d × L)	Part No.		Type	Size (mm) (d × L)	Part No.		
		Black	Silver			Black	Silver	
Type 1	K1.4 × 1.6	7-627-451-08	7-627-451-07	Type 1	P1.4 × 1.4		7-627-551-47	
	K1.4 × 1.8				P1.4 × 1.6	7-627-551-08	7-627-551-07	
	K1.4 × 2	7-627-451-38	7-627-451-37		P1.4 × 1.8			
	K1.4 × 2.2				P1.4 × 2	7-627-551-18	7-627-551-17	
	K1.4 × 2.5	7-627-451-18	7-627-451-17		P1.4 × 2.2			
	K1.4 × 2.8				P1.4 × 2.5	7-627-551-28	7-627-551-27	
	K1.4 × 3	7-627-451-28	7-627-451-27		P1.4 × 2.8	7-627-551-88		
	K1.4 × 3.5		7-627-451-47		P1.4 × 3	7-627-551-58	7-627-551-57	
	K1.4 × 4				P1.4 × 3.5	7-627-551-68	7-627-551-67	
	K1.4 × 4.5				P1.4 × 4	7-627-551-78	7-627-551-77	
	K1.4 × 5	7-627-451-78	7-627-451-77		P1.4 × 4.5			
	K1.7 × 1.8	7-627-450-78			P1.4 × 5	7-627-551-38	7-627-551-37	
	K1.7 × 2				P1.7 × 1.6	7-627-552-18		
	K1.7 × 2.2				P1.7 × 1.8			
	K1.7 × 2.5				P1.7 × 2	7-627-552-28	7-627-552-27	
	K1.7 × 2.8				P1.7 × 2.2	7-627-552-08	7-627-552-07	
	K1.7 × 3				P1.7 × 2.5			
	K1.7 × 3.5				P1.7 × 2.8			
	K1.7 × 4				P1.7 × 3	7-627-552-38	7-627-552-37	
	K1.7 × 4.5				P1.7 × 3.5	7-627-552-78		
	K1.7 × 5				P1.7 × 4	7-627-552-48	7-627-552-47	
	K1.7 × 5.5				P1.7 × 4.5		7-627-552-67	
	K1.7 × 6				P1.7 × 5	7-627-552-58	7-627-552-57	
	K2 × 2	7-627-452-08	7-627-452-07		P1.7 × 5.5			
	K2 × 2.2				P1.7 × 6			
	K2 × 2.5				Type 1	P2 × 1.8		
	K2 × 2.8					P2 × 2	7-627-553-18	7-627-553-17
	K2 × 3	7-627-452-18	7-627-452-17			P2 × 2.2		7-627-554-07
	K2 × 3.5					P2 × 2.5	7-627-553-28	7-627-553-27
	K2 × 4	7-627-452-28				P2 × 2.8		
	K2 × 4.5					P2 × 3	7-627-553-38	7-627-553-37
	K2 × 5	7-627-452-38				P2 × 3.5		7-627-554-17
K2 × 5.5			P2 × 4	7-627-553-48		7-627-553-47		
K2 × 6			P2 × 4.5	7-627-553-58		7-627-553-57		
K2 × 7			P2 × 5			7-627-553-67		
K2 × 8			P2 × 5.5					
			P2 × 6					
			P2 × 7	7-627-553-88	7-627-553-87			
			P2 × 8	7-627-553-98	7-627-553-97			
			P2 × 10	7-627-553-78	7-627-553-77			
Type 3	P1.4 × 1.4			Type 3	P1.4 × 1.4		7-627-850-37	
	P1.4 × 1.6				P1.4 × 1.6		7-627-850-47	
	P1.4 × 1.8				P1.4 × 1.8		7-627-850-77	
	P1.4 × 2				P1.4 × 2	7-627-850-08	7-627-850-07	
	P1.4 × 2.2				P1.4 × 2.2			
	P1.4 × 2.5				P1.4 × 2.5	7-627-850-18	7-627-850-17	
	P1.4 × 2.8				P1.4 × 2.8			
	P1.4 × 3				P1.4 × 3	7-627-850-28	7-627-850-27	
	P1.4 × 3.5				P1.4 × 3.5	7-627-850-58	7-627-850-57	
	P1.4 × 4				P1.4 × 4	7-627-850-68	7-627-850-67	
	P1.4 × 4.5				P1.4 × 4.5		7-627-851-17	
	P1.4 × 5				P1.4 × 5		7-627-851-27	

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# STEREO CASSETTE DECK

# TC-FX4

*US Model*  
*Canadian Model*  
*AEP Model*  
*UK Model*  
*E Model*

## CORRECTION

No. 1  
July, 1982

This correction updates the service manual to cover the misprintings in the parts list.

File this correction with the service manual.

### Page 35.

<i>No.</i>	<i>Correct Part No.</i>	<i>Correct Description</i>
86	3-783-472-11	MANUAL, INSTRUCTION ..... (AEP, UK, E)
	3-783-472-21	MANUAL, INSTRUCTION ..... (US, Canadian)
	3-795-136-11	MANUAL, INSTRUCTION; DUTCH/SWEDISH ..... (AEP)
	3-795-137-31	MANUAL, INSTRUCTION; FRENCH ..... (Canadian)

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<i>Ref. No.</i>	<i>Correct Part No.</i>	<i>Correct Description</i>
IC401	8-759-948-36	IC MSM5836RS

**SONY**  
SERVICE MANUAL